

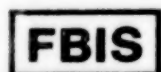
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1 November 1979

USSR Report

ECONOMIC AFFAIRS

No. 896



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NEW PLANNING DECREE GENERATES DISCUSSION, PROPOSALS

Economics and Application of Innovations

Moscow TRUD in Russian 3 Aug 79 p 2

[Article by A. Kunayev, president of the Kazakh Academy of Sciences, Alma-Ata]

[Text] In order to step up scientific-technical progress and expand the output of highly efficient new products, in 1980 all scientific-research, design, planning-and-design and technological organizations, testing (experimental) organizations, and scientific-production and production associations (enterprises) of industrial ministries will have been converted to the cost-accounting system of organizing projects to create, manufacture and apply new technology on the basis of job orders (contracts). (From the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance")

The 25th CPSU Congress listed the problem of scientific-technical progress among the key problems of party economic policy. The principal potential for raising production efficiency and the quality of performance lies within it. In his report addressed to the congress Leonid Il'ich Brezhnev said: "The party and government need research on problems which are related above all to comprehensive development of production and production management and recommendations that afford a possibility of increasing production efficiency substantially." From this standpoint the quantity and quality of scientific research and the proposals recommended for adoption determine the success of scientists' work. In essence the problem of application is now the most important one related to the future development of science.

Scientists of the Kazakh Academy of Sciences have achieved notable success in their work to improve the effectiveness and quality of research. There

is evidence of that in these figures. In the 3 years of the 10th Five-Year Plan 1,042 applications were filed on inventions; 427 author's certificates and 579 favorable decisions were obtained. In that time 112 developments were applied, effecting an economic benefit of more than 80 million rubles. In 1978 alone the saving from application of research results increased approximately 2.5-fold.

Here are other data indicating the high effectiveness of practical application of the results of scientific research. We can achieve a colossal gain if on the scale of the entire country we organize the production of shlakositol from the waste of the phosphorus industry. Use of the technology for thorough processing of vanadium ores and phosphate rock of Karatau will yield a benefit of more than 7 million rubles per year. The flooding of rice fields before planting, recommended by our scientists, will make it possible to obtain between 7 and 9 quintals of rice more per hectare. The use of dry bacterial yeasts in feed production offers a substantial increase of the country's livestock feed resources. These are only a few examples of what can come from a close alliance between science and practice.

Taking advantage of the valuable know-how of the Ukrainian Academy of Sciences, the Kazakh Academy of Sciences has been persistent in developing existing relations with production and has been seeking out new ones. Until recently the business contract was the principal form of these relations. The proceeds from business contracts represent 20 percent of total research funding, and the proportion goes as high as 50 percent for certain institutes. The institutes of metallurgy and ore dressing and mining have made it a practice to make a quarterly examination of the results of work under business contracts with enterprises and to hold joint meetings with officials of the USSR Ministry of Nonferrous Metallurgy on problems of practical application. We are constantly striving for the contract projects to be significant, challenging and stable. At present the contract projects still include many topics which are small and insignificant.

Joint project plans which a number of our institutes have with enterprises of the Ministry of Chemical Industry and the nonferrous metallurgy ministries of the USSR and Kazakh SSR have become a new form of relation with production. These plans, which are carried out on mutually advantageous terms, offer each party definite guarantees that the results of the joint research will be taken to its logical end point--industrial production. Such plans are now being prepared for the 11th Five-Year Plan.

Another important means of shortening the distance from scientific development to application are comprehensive programs concerning specific major problems. A number of republic ministries, 80 major industrial enterprises and 19 scientific institutions of the Kazakh Academy of Sciences are taking part in carrying out the 16 scientific-technical programs. The early experience has demonstrated that this form of collaboration between science and production is highly effective and has outlined possibilities for further improvement of these relations. Fulfillment of all these plans will

bring our developments closer to the requirements of the economy and will augment the output of science.

But in the area of application matters are still not as simple as they might appear at first. There are many difficulties and missed opportunities on the part of both science and practice.

I keep in a conspicuous place on my desk the plan incorporating our institutes' work related to application of the results of scientific research; many of these projects have been fulfilled in the form of an invention and have been checked out in pilot operation. Every time you examine these problems, you have a double feeling. On the one hand you are happy that the particular project has gone into production and has begun to yield an economic benefit. On the other you are grieved to see how long it takes and how much trouble there is in assimilating the results of scientific research in the economy.

Here is an example. The Institute of Metallurgy and Ore Dressing conducted an extensive series of interrelated projects to improve the production equipment and processes at the Pavlodar Aluminum Plant. The methylol derivative of polyacrylamide was recommended as a means of inducing red mud to flocculate. This flocculant intensifies the processes of sedimentation and filtration of the mud, and it also reduces consumption of a foodstuff--rye flour. The process has gone through full-scale tests and has been accepted for application. The manufacturing plan of the section for preparing the flocculant was approved by the republic's ministry of nonferrous metallurgy back in January 1975, but a start has not been made on building the facility. There are unfortunately quite a few such cases.

We are also quite aware of our own shortcomings in this regard. It happens rather frequently that our research is not taken to the end. One of the reasons is that our academy of sciences does not have its own pilot-experimental and machine shop facilities, nor specialized design offices. It is this reason, for example, for the failure to bring along to the stage of series manufacture many models of drilling machines, instruments and equipment developed in the Mining Institute. Though the theoretical and design work on them was completed more than 10 years ago. Cases like this occur in other scientific institutions as well. We are therefore placing definite hopes on the laboratories of industries, which would be financed by ministries and departments and whose creation has been called for by decisions of the governing bodies of Kazakh SSR. But so far not a single proposal of the academy of sciences has been accepted by the ministries.

We should dwell on the role of Gosplan in this important matter, taking into account that the republic lacks a state committee for science and technology. We are receiving effective and competent aid on such matters as planning research projects, capital construction and the training of scientists. We cannot unfortunately say the same for organization of industrial application. Gosplan only includes a few of the many dozens of research projects in the

republic plan. The others are applied under contracts with ministries, departments and enterprises. For example, the Institute of Experimental Biology has completed a project to create a new and more productive breed of hybrid hogs. They are being raised on 25 farms, and this is yielding an economic benefit on the order of 900,000 rubles. But the project was not accepted in the republic plan for application.

In our view Gosplan's participation ought to be particularly vigorous in cases when application is being delayed for one reason or another. I will again give an example from the field closest to me. The Institute of Metallurgy and Ore Dressing developed a technology for extracting vanadium from the highly siliceous ores of Karatau by using them as a flux when phosphate rock is processed in an electric furnace. It is 4 years now since the Central Asian Scientific Research Institute for the Nonferrous Metallurgical Industry did the feasibility study which anticipated an economic benefit of 7.5 million rubles. The USSR Ministry of Chemical Industry and Ministry of Ferrous Metallurgy and the Southern Kazakhstan Geological Administration concluded that it was expedient to apply this technology in industrial production.

An assignment should have been issued to the Kazakh Ministry of Geology to do detailed geological prospecting at the vanadium ore deposit at Bala-sauskanda and to request that the Ministry of Chemical Industry allocate funds to organize the mining of vanadium-bearing quartzites to be used in the production of elemental phosphorus with vanadium compounds as a by-product. This matter has not yet been dealt with.

The problem of expanding the raw materials base of the aluminum industry is very serious now. The Institute of Metallurgy and Ore Dressing has done the scientific groundwork and developed the technology for an alkaline hydrochemical method of processing a low-grade raw material--ash and waste from beneficiation of the coals of the Ekibastuz Basin, nepheline rock of the Shimskiy alkalic massif and Balkhash sericites. The possibility of combined use of the raw material to obtain alumina, alkalies and building materials is a special feature of the proposed process. A high-temperature installation, for which the design and equipment are available at the Pavlodar Aluminum Plant, needs to be built to conduct full-scale tests. Three years have passed, and nothing has been done to build the facility. Yet the supposed economic benefit of this project is more than a million rubles per year.

Gosplan, which is a supradepartmental organization, should play a decisive role in shaping the republic plan for application of the results of research and should defend the proposals of scientific research institutes against the departmental approach in evaluation of scientific projects. Up to now Gosplan has actually only monitored dates for clearance of projects with ministries, and it has compiled the summary plan on the basis of their proposals.

Before a scientific development project is recommended to Gosplan for inclusion in republic plans, it ought to be mandatory that it be cleared with the ministry or department. Clearance is, of course, necessary; the industry must render its conclusion. But what happens is that we knock on the door, say, of the Kazakh Ministry of Nonferrous Metallurgy, and we show them the results of the completed scientific research. Rather often we encounter a wall of indifference: either there are no funds, or the plant is undergoing reconstruction, or the plan is being fulfilled beautifully at the enterprise, and they don't need us. I think that in such situations Gosplan is simply required to use its authority in promoting application of the research. Other times the scientists go directly to Gosplan and argue the necessity for immediate application of the result of a scientific research project. And sometimes a telephone call is enough for the ministry to accept the completed project for application. But it is not possible for every scientific research project to organize its defense in Gosplan.

At one time the divisions of Gosplan assigned to specific industries made it a practice to hold working conferences in which there would be representatives of the ministries and departments, the Gosplan science and technology division, and the republic academy of sciences. The participants would exchange information, would define the specific tasks of the scientists, and would specify the topic plan of joint projects. The practice of holding those conferences should be resumed; their principal aim was to increase production efficiency and to apply scientific advances to production as quickly as possible.

The republic's scientists showed great interest in the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance," which has just been published. We are especially gratified that speeding up the realization of scientific-technical discoveries and developments aimed at increasing the growth of the productivity of social labor and product quality is among the measures for raising the level of planned efforts in the economy. The conversion of scientific research institutions and enterprises to the cost accounting system in organizing the work of creating, manufacturing and applying new technology, the unified funds for development of science and technology, and the new procedure for awarding bonuses to personnel of scientific research institutions and enterprises for creating and applying new technology--all of this is a powerful incentive which will augment science's yield.

At present there are many completed research projects in the stage of full-scale trials and application in the scientific institutions of the Kazakh Academy of Sciences. In future they will all bring a tremendous economic benefit. The task is to convert future millions of profit into reality as quickly as possible. Our overall slogan should be: Everything that scientists have developed should be applied.

Benefit From Capital Investments

Moscow TRUD in Russian 4 Aug 79 p 2

[Article by Khachaturov, member of the academy and chairman of the Scientific Council for the Economic Efficiency of Fixed Capital, Capital Investments and New Technology of the USSR Academy of Sciences]

[Text] Capital construction takes up considerable space in the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance." Much attention is paid to steps toward speeding up activation of production capacities and facilities and to increasing the efficiency of capital investments. This is quite understandable. After all, capital construction is done on an enormous scale in our country.

It is sufficient to say that capital investments last year amounted to 129 billion rubles and were 14 percent greater than in 1975. In the 1971-1978 period fixed productive capital increased by 89 percent and at the end of 1978 attained the impressive figure of 1,006 billion rubles.

These figures indicate tremendous achievements on the part of capital construction. But these achievements can be far greater. That means carrying out the measures outlined in the decree as fast as possible. Which problems need to be solved first?

I would first like to call attention to the fact that the economy's fixed capital has been increasing faster than output. In other words, the output-capital ratio is dropping; put another way, the capital intensiveness of output is rising. This has resulted from a number of causes, both objective and subjective. I would say, for example, that the change in the quality of raw materials, higher cost of extraction, the eastward movement of industry, development of new areas, and so on--all of this, of course, cannot fail to result in higher capital intensiveness. These are causes of an objective nature which have to be thoroughly analyzed, and an effort has to be made to eliminate their adverse effects.

But there are causes related to subjective factors and shortcomings in people's work. The first cause to be put in this group is the instability of the plan of capital investments. The 5-year plan has still not become the principal document guiding the entire course of capital construction in the country. Often even annual plans of capital investments are adjusted and revised. Incorporation of numerous changes has an adverse effect on the entire course of construction.

The decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance"

states that "beginning with the 11th Five-Year Plan USSR ministries and departments and councils of ministers of union republics will be assigned a stable 5-year capital construction plan (with a breakdown of assignments by years), which has been balanced with resources in terms of materials, manufacturing and power equipment, labor and financial resources, and also the capacities of construction and installation organizations." Implementation of this principle will make it possible to substantially increase the benefit from capital investments.

The decree which has been adopted provides for a number of specific steps to enhance the responsibility of customers and contractors for putting production capacities and facilities into operation on schedule. USSR Gosplan, USSR ministries and departments, and councils of ministers of union republics are in addition ordered to draft measures aimed at a sharp reduction in the number of construction starts. The reason is that in the past the plan has included too many projects under construction at the same time. The result is a progressive scattering of capital investments. At the present time there are 250,000-260,000 production projects included in the plan, not to mention others. However, we have about 4 million construction workers employed in building them. This means that there are only 15-16 workers at the average construction site.

This situation cannot fail to slow down construction. Actual construction time considerably exceeds the established standards. Our major industrial facilities take 5-10 years or more to build, and the average is 3-4 years.

Project planning time is extremely lengthy--often 2-3 years or more, as are the times required to attain the anticipated physical output and earnings. As a result when a new enterprise or one that has undergone reconstruction begins to operate at full capacity, from the technical standpoint it is already old fashioned.

What are the ways and means of helping to speed up construction and to reduce the notorious "partial completion"? Of course, much depends on enhancement of responsibility. But at the same time there is a need for measures which motivate construction organizations to deliver altogether finished projects on time and ahead of schedule. One such measure is to award bonuses to builders out of the funds which the customer saves thanks to delivery ahead of schedule.

At the same time, an end must be put once and for all to a situation in which organizations are financed for the amount of work they have performed by stages. It is this system which inculcates in builders an interest in doing "profitable" work items first and postponing "unprofitable" which is such a bane to the economy. In the final analysis partial completion is growing. The capital investment plan is fulfilled in this situation, but delivery of projects for use is lagging behind the plan.

The decree adopted by the CPSU Central Committee and USSR Council of Ministers opens up ways of solving this problem of capital construction. The decree states that the adoption of the system whereby accounts are settled between customers and contractors at the estimated cost of marketed output of construction for enterprises, complexes that can be operated independently, production lines and facilities prepared for production and the rendering of services on which construction is altogether finished and which have been delivered for operation shall be completed in 1981.

More extensive use of long-term credit instead of nonreturnable budget financing could have quite an important role to play in correcting the shortcomings in capital construction. This will compel the customer to think seriously and responsibly before deciding to build a particular project. After all, money obtained on credit must be returned. That makes it necessary to thoroughly substantiate the feasibility of capital investments and to guarantee efficient operation of the facility once built. But when the financing comes from the budget, it sometimes is sufficient to "get" the project included in the plan and to have the funds allocated for its construction.

Long-term credit is unfortunately not being fully utilized. Its share in the financing of capital investments, which has increased somewhat in recent years, amounts to approximately 8-10 percent, but it ought to be brought up to 25-30 percent. It would be best to use credit to fund all projects whose payoff period is less than 8 years. Experience shows that construction projects built with credit are put into operation on time and ahead of schedule far more often than construction projects funded from the budget.

Broader use of bank credit has been called for in the decree of the CPSU Central Committee and USSR Council of Ministers we have mentioned. The specific measures related to this will unquestionably help to improve capital construction in our country.

One of the major shortcomings of construction is that it is considerably more expensive than the original cost estimate: sometimes between 1.5-2-fold more expensive or even more. This phenomenon can only partially be explained by objective causes--the change of prices of materials and equipment and higher wages. More frequently cost overruns are the result of subjective factors altogether subject to correction. Here are some of them.

When the cost estimate is compiled, it is in the interest both of the project planners and the customers that it be compiled as rigidly as possible: the project planners are looking for a bonus, and the customers are assuming that a "cheaper" project will be included in the plan more quickly. But after it takes its place in the title list, the estimates are revised, and the adjustment is almost always upward.

This is why the decree notes that approved title lists must be an unalterable planning document covering the entire period of construction, binding

upon customers, building contractors, planning, financial, banking and supply agencies, and suppliers of equipment and building components.

The new system of criteria for evaluation of work done should help to improve construction. At present the system of evaluation is based on outlays of capital investments. In other words: the more funds have been invested in a particular object, the better grade is given to the construction workers. In this case they are motivated to use expensive and heavy materials everywhere. Even if they are building cow barns, they sometimes use prefabricated reinforced-concrete components!

The decree of the CPSU Central Committee and USSR Council of Ministers orients builders toward economical and efficient utilization of material and other resources. Carrying out the measures envisaged by the decree of the CPSU Central Committee and USSR Council of Ministers will make it possible to increase the rates and quality of capital construction appreciably.

New Decree and Product Quality

Moscow KRASNAYA ZVEZDA in Russian 7 Aug 79 p 2

[Article by Ye. Smirnov]

[Text] Much is being done in our country to improve quality of performance and products which enterprises produce. Much attention has been paid to this issue in the decree just adopted by the CPSU Central Committee on further improvement of the economic mechanism and the tasks of party organs and government agencies and in the decree of the CPSU Central Committee and USSR Council of Ministers on improvement of planning and intensification of the impact of the economic system on higher efficiency and quality of performance.

An entire system of measures--technical, economic and organizational--has been outlined in these documents for improvement of product quality. Conclusion of 5-year agreements, for example, is being introduced between organizations trading with one another; these agreements will make provision for updating products and improving their finishing and external appearance. It has also been proposed that measures be drafted and carried out to raise the technical-and-economic indicators of machines, equipment and other industrial goods produced. Further development of the system of certification has been outlined as a way of improving the quality of products of this kind.

Incidentally, state certification of the quality of industrial products, intended both for the national economy and for exports, as well as for sale to the public, began in our country relatively recently. It was first carried out as an experiment in 1967. At that time only about 1,000 products were certified from 240 enterprises of the electrical equipment industry, machinebuilding, the motor vehicle industry, machine tool and tool industry, and certain other industries. The country's first state Quality Emblem was

awarded to one of the series of electric motors manufactured by the Moscow Electrical Machine Plant imeni Vladimir Il'ich.

At present (according to figures as of 1 July 1979) we have 69,774 different industrial products manufactured by 8,642 enterprises which have been awarded the state Quality Emblem. Moreover, in just the first half of this year the prestigious pentagon was awarded to 21,644 products, including 17,632 consumer goods and 3,962 products for industrial and technical use.

What sort of product is put in the superior-quality category? A product which in its performance characteristics is equal to or better than the best Soviet and non-Soviet exemplars. If a product does not stand up to this comparison, but meets current USSR standards, it is put in the first quality category. Finally, those products which do not altogether meet present requirements are put in the second category. They must either be substantially improved or altogether withdrawn from production.

This classification is a good reference point for consumers of industrial products and also for their manufacturers. It helps the collectives of enterprises to see more clearly the results of their work and the directions in which they have to concentrate their efforts in the endeavor to improve product quality. Its adoption has opened up pathways toward broader introduction of comprehensive quality control systems. It has become possible to plan industrial production with respect to the quality of products produced, and not only with respect to quantity, as was previously the case. Quality indicators of the most important products were included in national economic plans of the current 5-year period for the first time. These plans, moreover, provide that the share of products in the superior-quality category must increase from year to year.

As a matter of fact it is rising, yielding us a substantial economic benefit. For, as Comrade L. I. Brezhnev has said, "high quality represents a saving of labor and material resources, a growth of export capabilities, and ultimately better and fuller satisfaction of the needs of society." The decrees on further improvement of the economic system accordingly provide for the building of those new production capacities at which production of products of superior quality is ensured.

The ever greater share of products bearing the state Quality Emblem when they leave the gates of the enterprise is one of the clear indicators that our people are successfully carrying out the economic program advanced by the 25th CPSU Congress and embodied in the specific assignments of the 10th Five-Year Plan, which has rightly been called the 5-year plan of efficiency and quality.

Georgian Gosplan Official Interviewed

Tbilisi ZARYA VOSTOKA in Russian 8 Aug 79 p 2

[Interview with O. Kakauridze, deputy chairman of Georgian Gosplan, by A. Gordiyenko]

[Text] Question: The economic potential of Soviet Georgia, one of the important components of the country's unified economic system--is growing dynamically and at a high pace with every 5-year period. The know-how acquired and the economic experience convincingly show that one of the fundamental advantages of our system and the heart of management of the socialist economy is efficiently organized planning of economic development and constant improvement of the forms and methods of economic management. The fourth year of the 5-year period is nearing the finish line. How is the republic doing? What sort of problems need to be solved for successful fulfillment of the assignments of the 5-year period as a whole? What are the principal directions for our economy's development in 1980?

Answer: The principal features of the present stage of development of our society are the immeasurably larger scale of production, the ramification and complexity of economic relations and the faster pace of scientific-technical progress. These processes are clearly traced both in the country as a whole and also in each republic individually. Take, for example, Georgian SSR: in just the first 3 years of the 10th Five-Year Plan, thanks to the set of measures consistently carried out by the Georgian CP Central Committee to implement the historic decisions of the 25th CPSU Congress, the growth of the gross social product has exceeded the assignment of the 5-year plan for the republic by 3.5 points, and the assignment for national income has been exceeded by 6.2 points.

In short, the rates are high, and they will gradually increase. The issues in the foreground are those of making economic management more effective and of improving the entire complex economic system and the system for planning economic development. This task was set at the 25th CPSU Congress. "Our country," Comrade L. I. Brezhnev noted in the report addressed to the congress, "was the first to undertake planned guidance of the economy. Dozens of other states have been and are now learning from the complex experience we have in this field. But even we are now faced with the task of raising the level of planning work, of bringing it into conformity with the new scale and shape of our economy and with the new needs of the time."

It is this goal which is pursued by the decrees recently adopted: the decree adopted by the CPSU Central Committee on further improvement of the economic system and tasks of party organs and government agencies, and the decree adopted by the CPSU Central Committee and the USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance." These two documents open up a very rich layer of reserves for a

further rise in the rates of the country's economic and social development, demonstrating the invincible vitality of our planning system. The decrees cover an extensive set of management problems and, taking as their points of departure the decisions of the 25th CPSU Congress and subsequent plenums of the Central Committee and the principles of the new Soviet Constitution, an orderly system of measures to further improve planned guidance of the economy, the development of democratic principles in the management of production, and enhancement of creative activity and initiative on the part of work collectives.

Question: In letters from readers of ZARYA VOSTOKA the editors have recently received we frequently find a question concerning the principal and pivotal task set forth in the decrees. What does it consist of?

Answer: To give a brief answer, the task is primarily to ensure dynamic growth of our economy on the basis of a high level of planning and economic performance, to bring them up to the needs of the present stage--the stage of an advanced socialist society.

Take, for example, the system of indicators and economic standards which is being introduced at all levels of economic activity. The work of every work collective will be evaluated not with respect to "gross output," but on the basis of its specific contribution--with respect to the growth of net output, fulfillment of the orders of consumers, total profit, and other indicators. This will unquestionably make evaluation more objective and, which is the main thing, will motivate participants in production and management to make better use of the available potential and to improve efficiency and the quality of performance.

There is much work to be done. The responsibility for successful implementation of the new economic system lies not only on planning personnel. A great role is expected to be played here by ministries and departments and by party and soviet organs. One of the principal points where effort should be applied is on overcoming the frequently encountered loyalty to accustomed methods of operation which are now outdated and on overcoming barriers which are obstructing introduction of the new.

Question: The decree of the CPSU Central Committee and the USSR Council of Ministers on improvement of planning and intensification of the impact of the economic system on raising efficiency of production and quality of performance notes that the principal work in these directions is being staged in the 11th Five-Year Plan, though certain new principles will go into effect at the beginning of next year. How ready is our republic's economy for this reorganization?

Answer: As I have already noted, the republic is confidently headed toward the targets outlined by the Main Lines of Development of the USSR Economy in the Period 1976-1980, which were approved by the 25th CPSU Congress. The principal result of the economic and social growth of Georgian SSR lies in

the fact that thanks to dynamic and proportional economic development, higher efficiency of social production and better quality of performance, the 4 years of the 5-year plan have meant a further strengthening of the general economic and industrial potential of the republic, a substantial rise in the prosperity of the people and overfulfillment of the assignments of the 5-year plan with respect to the most important indicators.

According to the preliminary estimate, taking into account the results of development of the branches of material production over the 3 years that have passed and progress in fulfilling the current year's plan, the volume of the gross social product in 1979 will exceed the 1975 figure by 28.3 percent, instead of the 24 percent based on the calculations of the 5-year plan. The planned level of the national income produced on the territory of the republic will also be substantially surpassed.

Along with the rapid increase in the scale of social production, a typical trait in economic development of the republic in the 5-year plan so far has been improvement of the reproductive structure, industrial structure and social structure of the economy. The share of newly created value in the total volume of production is increasing. This year it is expected to be 0.7 point higher than the 1975 figure.

This rapid growth of the republic's industrial potential has been achieved thanks to a substantial overfulfillment of the assignments of the 5-year plan for development of industrial production. Its volume this year, according to preliminary estimates, is 29.9 percent higher than the level of the last year of the Ninth Five-Year Plan. It is expected that the assignment of the 5-year plan for extraction of petroleum, casinghead gas and coal, manganese ore, production of metal-cutting machine tools, the output of the garment industry, etc., will be fulfilled and overfulfilled in 1979.

The agricultural sector of the economy of Georgian SSR is also developing dynamically and at a high pace. Thanks to the interrelated measures envisaged by the decisions of the 9th and 12th (1978) plenums of the Georgian CP Central Committee, in 4 years of the 5-year period the average annual volume of the gross output of agriculture in the republic has increased 30.4 percent, instead of the 25.2 percent envisaged by the computations of the 5-year plan.

At the same time, serious shortcomings, bottlenecks and disproportions have been noted along with the results of operation in the first 3 years of the 5-year plan and in the current year concerning the economic development of Georgian SSR. With respect to certain indicators planning assignments of the 5-year period have not been fulfilled. To be specific, the republic is lagging somewhat behind the targets of the 5-year plan for the growth rates of the volume of production in a number of sectors of the economy. This applies first of all to industry under union jurisdiction, whose development has not kept pace with the computations of the 5-year plan. There has been a sizable lag with respect to the growth rates of labor productivity and the

output of a number of very important products. The situation is compounded by the fact that many enterprises under union jurisdiction make numerous downward adjustments of planning assignments, which is having an adverse effect on the growth rates of production for the republic as a whole.

The growth rate of labor productivity which has been achieved is not altogether up to the tasks of a further rise in the efficiency of social production; it is lagging behind the growth rate of gross industrial output.

There are many shortcomings and unsolved problems in the republic's capital construction; full use has not been made of the potential in agriculture. Accordingly, when the draft plan for economic and social development of Georgian SSR for the year 1980 was compiled, particular attention was paid to reinforcing and augmenting the constructive results and trends which have been achieved and to planned correction of the shortcomings that exist in certain sectors and industries. This is indispensable to successful fulfillment of the assignments of the 10th Five-Year Plan as a whole.

Question: In general outlines what are the problems the republic must solve in the final year of the 5-year period; where will the principal efforts of work collectives be applied?

Answer: The coming year is the most important stage in carrying out the socioeconomic program defined by the 25th CPSU Congress and the 25th Congress of the Georgian CP. On that basis the draft of the State Plan for 1980 clearly formulates the principal task to be performed by each work collective and every worker. It consists of achieving fulfillment and overfulfillment of the assignments of the 10th Five-Year Plan with respect to the most important indicators of economic and social development and thereby creating a strong material and technical base for accelerated development of the productive forces of Georgian SSR in the 11th Five-Year Plan in accordance with the strategic course aimed at bringing the republic's level of socioeconomic development closer to the average union level.

I will mention a few of the most significant figures to give a better idea of the scale of the work to be done. The gross social product is supposed to increase 9.9 percent over the level expected this year. The national income should also increase by that amount. In the coming year the production of the net, newly created, product will increase 9.4 percent in industry and 3.9 percent in agricultural production.

The principal way of achieving this is to raise production efficiency in all sectors of the economy. The rise of the productivity of social labor is planned at 10.8 percent for the year 1980; it is to account for 95.6 percent of the total growth of national income produced in the republic.

The program which has been outlined is strenuous, but realistic. Georgian Gosplan, relying on an analysis of the figures achieved, believes that the republic's economy and all its sectors and industries have the potential and

reserves for achieving what has been planned. In industrial production, for example, the objective conditions exist for an 8.5-percent growth of the volume of gross output in 1980. Achievement of that figure is indispensable to successful fulfillment of the 5-year plan as a whole for this very important sector of the economy. There are reserves for raising the pace of operation in other sectors as well. Our overall success will indeed depend on the skill and economic astuteness with which they are utilized.

Question: But this success is largely determined by the level of planning--the rates of progress of the republic's economy toward these targets depend on the soundness of the assignments approved....

Answer: Unquestionably. That is why the measures to be carried out by the republic gosplan to improve planning practice are an important direction for improvement of production and production management. Guided by the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance," by the instructions of Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, and by the decisions of the Georgian CP Central Committee and the republic's council of ministers, in compiling the draft plan for 1980 Georgian Gosplan has been and is now implementing a number of measures aimed at raising the level of scientific soundness and consistency of the planning decisions worked out and at making the assignments approved more comprehensive in nature. For instance, the section entitled "Scientific-Technical Progress" has been considerably expanded for next year in the principal indicators of the draft plan. For the first time it reflects for the entire republic and in a breakdown by ministries and departments measures planned to apply the results of completed research projects and design development projects, at utilization of production waste, at reduction of production cost and at raising labor productivity thanks to application of new technology. A number of very important indicators of the plan have also been worked out for the first time with computers. To be specific, this method has been used to determine material production costs in the industrial sector, indicators of the efficiency of social production, and so on.

In short, much has been done so that the state plan for the final year of the 5-year plan is both strenuous and realistic. There is no question that achieving what has been outlined will require that every ministry and department of the republic and enterprises, organizations and construction projects under union jurisdiction concentrate efforts on discovering and fully utilizing internal potential for growth and improvement of production. The work now being done by specialized commissions of the Georgian CP Central Committee in the rayons of the republic to discover reserves for additional output will be an important step along this road. It is indispensable to put to use every opportunity for a further rise in production efficiency and to achieve strict adherence to deadlines in starting up production facilities and in attaining their rated capacity and to achieve a rise

of labor productivity. These requirements have been set forth in the decrees of the party and government recently adopted, and it is everyone's duty and obligation to unswervingly follow them in their practical activity.

New Decrees and Improved Economic Management

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 18 Aug 79 p 2

[Article by Ya. Ryabov, first deputy chairman of USSR Gosplan: "The Heart of the Plan"]

[Text] At the present stage of development of our society the scale of production has grown immeasurably, and economic relations have become more complicated. Given these conditions, it is becoming particularly important to further improve the management of the economy. This is the aim of the decree of the CPSU Central Committee and USSR Council of Ministers which was recently adopted and which is entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance."

The decree worked out a system of measures expected to raise the level of economic performance and on that basis to ensure a rapid growth of our economy in accordance with the tasks set by the 25th party congress. Among the most important measures to raise the level of planning this one is listed: speeding up the realization of scientific-technical discoveries and developments. What has been done and what is now being done to see that this task is performed?

Under present-day conditions the principal peculiarity of planning scientific-technical progress is that scientific-technical measures are essentially included in all sections of the plan. Moreover, for all practical purposes they represent the heart of every section and of the entire plan. For example, in the section entitled "Industrial Sector" there is to be an increase in the output of highly efficient models of machines, equipment, computers and materials; in the section entitled "Capital Construction" there is to be extensive application of lighter fabrications in building enterprises and projects. Moreover, the state plan includes a special section entitled "Development of Science and Technology." This section reflects realization of scientific-technical programs, organization of the production of new products, application of progressive technology, scientific management, equipment for mechanization and automation, computerized management systems and many other things.

As we know, special-purpose comprehensive programs for scientific-technical progress were first drafted and approved for the 10th Five-Year Plan.

Nor was this an accident. Today the integration of science and production is noticeably increasing. In this situation the importance of the comprehensive approach to planning is growing immeasurably. This can be achieved

primarily by drafting and implementing comprehensive special-purpose scientific-technical programs. In a number of cases they make it possible to make the transition from development of individual--though perhaps even very important--new machines and manufacturing processes to the creation of entire production operations and core facilities entirely outfitted with new equipment and technology. We might mention in this connection the mining, timbering, transportation and fuel and energy complexes.

Supplying new machines and equipment to enterprise, introduction of new manufacturing processes and new methods of organization of work, and thereby increasing the degree of mechanization and automation of production made it possible during the years of the 10th Five-Year Plan to raise the technical and economic level of production and make 1.3 million workers available for other work. In the fuel and energy complex, for example, there has been an increase in average capacity per production unit and fundamental improvement of technology in coal mining and extraction of petroleum, gas and shale. Nuclear energy has moved from reactors with a capacity of 440,000 kw to construction of nuclear power plants with reactors rated at 1 and 1.5 million kw. Economical shapes of rolled products which reduce consumption of structural steel shapes have been introduced in ferrous metallurgy.

One might continue with the enumeration of such examples.

The principal problem that usually arises with new technical designs is their application. Some scientific-technical programs are being poorly carried out. Why is this?

In my view full advantage is not yet being taken of planning based on special-purpose programs. In the cycle "research--creation--organization of production--application of new technology" it is very important that the movement from one stage to the next be uninterrupted. But this is exactly what we lack. At present little attention is being paid to the final stage, the interests of the consumer.

How is this shortcoming to be corrected? I think we need to use comprehensive special-purpose programs to plan assignments for production and saturation of the economy with newly created technology. Planning agencies will have to take a more careful look at these programs. I am thinking above all of the material resources to back them up. This is difficult, but feasible. Programs of this kind have been approved in the current year. They have to do with construction of a high-pressure gas pipeline, introduction of plasma machining of products, and manufacture of new models of vibrators. Programs are being drafted for production of tungsten-free and low-tungsten steels, man-made single crystals, and certain other products.

There are also other reasons why planning assignments for development of science and technology and comprehensive programs are not altogether being carried out. Here we might mention tardy completion of research, designs and manufacturing processes that have not been completely worked out, a

shortage of components, raw materials, supplies, lateness in putting production capacities into operation, and finally, unsatisfactory preparation of production. But one of the principal reasons is that in a number of cases the heads of ministries, departments, associations and enterprises underestimate the importance of new technology and are little concerned about creating it and putting it into production. The present rates of scientific-technical progress impose particular demands upon the personnel of all planning and economic units. Their work must today be assessed primarily according to the contribution they make to solving the problem of creating new equipment and technology and their application in the economy.

It is also very important to make a fuller reckoning of the ultimate results of that application.

All these considerations will be taken into account in preparation of the new 5-year plan.

The 11th Five-Year Plan is being shaped in accordance with the tasks envisaged by the decree of the CPSU Central Committee and USSR Council of Ministers. With the help of ministries and departments USSR Gosplan is drafting the Main Lines of Economic and Social Development of the USSR for the 1981-1985 period and up to the year 1990. The principal goal of economic development is to raise the standard of living of the Soviet people. The principal means of performing this task is to increase further the efficiency of social production as a whole, above all by speeding up application of scientific and technical advances in the economy. In preparing the new 5-year plan, then, extensive use will be made of the materials of the Comprehensive Program for Scientific-Technical Progress and Its Socioeconomic Consequences. It was drafted under a decision of the authoritative bodies by the USSR Academy of Sciences, the State Committee for Science and Technology, scientific organizations of academies of sciences of the union republics and ministries and departments.

Thus the 11th Five-Year Plan continues the course toward extensive use of intensive factors in economic development which was defined by the 25th party congress.

We must state frankly that creation and application of new technology involve rather complicated economic problems. Some of the workers are demanding: "The question of the manufacture of new equipment needs to be raised. Its price is now rising twofold and threefold, while its productivity is rising by a matter of percentage points."

This is a rather complex issue; it could be the topic of a separate conversation. There are grounds for criticizing certain of our specialists, scientists and designers because in a number of cases they have created expensive equipment that is not productive enough. This, of course, not only reduces the output capital ratio, but also is reflected in the efficiency of social production. At the same time we should bear in mind that industrial

products, including equipment, are also more expensive because of the higher costs of raw materials and fuel. New areas have to be developed for mining and extraction, above all in Siberia and the north, and the mining-geological conditions are deteriorating in the old regions. All of this requires large additional capital investments. Under such conditions we are faced with the problem of a certain rethinking of economic and technological methods and directions for solving a number of the most important problems of the economy in all its severity. First we must put maximum emphasis on development and application in the economy of those manufacturing processes which guarantee more economical and efficient, more comprehensive and waste-free use of all types of resources. Here again we should be helped by the Comprehensive Program I have already mentioned.

It is a very important task to achieve consistency of the plan. The simplest way to achieve this is by creating sizable reserves. They are a necessity in any plan. But we must remember that the creation of reserves beyond the necessary minimum diverts resources from the production process. In the final analysis this will have an adverse effect on consumption and the rise of the people's prosperity. That is why much attention is now being paid to the most rational and sensible use of raw material resources, above all by drafting and adopting a scientifically sound system of norms and standards and through the most efficient utilization of scientific-technical and production potential. All of which an advanced socialist society possesses.

In real life the consistency of the plan is usually violated because certain enterprises do not fulfill the assignments issued by the state. As a result serious difficulties occur throughout social production down through a chain of elaborate intersector relations. At the November (1978) Plenum of the CPSU Central Committee there was discussion of the need for unswerving fulfillment not only of the plan as a whole, but also of contractual obligations. This in turn is related to improving the system of evaluation of plan fulfillment.

These are some of the directions of our work in preparing the 11th Five-Year Plan and related to the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance."

USSR Gosplan Official Interviewed

Leningrad LENINGRADSKAYA PRAVDA in Russian 23 Aug 79 p 2

[Interview with V. M. Ivanchenko, deputy division chief of USSR Gosplan: "Economic Mechanism of Advanced Socialism"]

[Text] The decree of the party's central committee on further improvement of the economic mechanism and on the

tasks of party organs and government agencies and the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance" measures are outlined which are aimed at intensive growth of the Soviet economy and at fuller utilization of the capabilities of the socialist planning system in implementing the party's economic policy. A TASS correspondent interviewed V. M. Ivanchenko, doctor of economic sciences and deputy division chief of USSR Gosplan, on the problems of raising the level of planning.

Question: What sort of requirements do the decrees set forth concerning planning and improvement of the quality of plans?

Answer: The plan is the principal instrument for achieving the tasks which the party has set of intensive economic growth and a faster rise of the efficiency of social labor. Higher requirements are therefore advanced concerning the scientific level of planning, the quality of planning work and enhancement of the role and responsibility of USSR Gosplan, other planning agencies, ministries and departments, associations and enterprises for drafting fully consistent and highly efficient plans and for ensuring their fulfillment.

Given the present scale and dynamic nature of production and under the impact of the scientific-technical revolution special significance is being given to the knowledge and evaluation of the future. It is important to accurately predict the course of scientific-technical, demographic, economic, social and other processes and to reflect them properly in planning decisions.

The procedure envisaged for applying in economic management a system of multiannual and current plans in which the 5-year plan is the heart and keystone on the one hand strengthens the role of state plans and on the other creates conditions necessary to further development of the economic initiative and creativity of the collectives of enterprises and associations in accomplishing economic maneuvers and in day-to-day solution of the problems of reorganizing production in the interests of the consumer.

When we say that the plans comprise a system, we mean that their interrelationship is continuous, that they have the same goal, that one plan arises out of the other and represents its extension and detailed elaboration. The role of scientific forecasts and of work on every aspect of fundamental problems is greatly enhanced in working out the long-range future as a form of continuous planning.

This is confirmed by experience in work on the comprehensive program for scientific-technical progress up to the year 2000. It was compiled by the

USSR Academy of Sciences, the State Committee for Science and Technology and USSR Gosstroy as an important element in substantiating the main lines of economic and social development of our country up to the year 1990 and in work on the major problems of the 11th Five-Year Plan.

Question: What sort of requirements do the decrees set forth concerning the 5-year plan?

Answer: The 5-year plan should solve the problems of structuring, proportioning, balancing and concentrating resources on solving the most important problems of the national economy and on carrying out major scientific-technical programs for the comprehensive development of the union and autonomous republics, regional industrial complexes and large cities.

This kind of plan (in which the assignments are broken down by years) is becoming the principal form for achievement of the strategic goals and performance of the strategic tasks of party economic policy as set forth in long-range prospective programs.

Cycles for renewal of the production of many products, the solution of important scientific-technical problems and construction of major production complexes are by and large fitted into the 5-year period. At the same time, the specific technical-and-economic parameters of plans and the process of shaping production relations are examined rather fully within the 5-year period. This makes it possible to use the 5-year plan as a work program in economic management at every level of sectoral and regional management.

As experience has shown, thorough and comprehensive substantiation of the system of programs, balances, indicators and economic standards, along with the creation of reserves in the 5-year plan, make it more stable and sufficiently reliable for the organization of production and economic relations and for conclusion of long-term contracts concerning delivery of products, raw materials, supplies and components.

A possibility is created on the basis of stable indicators and economic standards assigned for the years of the 5-year plan to build cost accounting relations not only within the enterprise and among enterprises, but also to develop them in the industry as a large production-economic complex in which production associations are the principal unit.

Question: What is the impact of the new role of the 5-year plan concerning higher effectiveness of counterplanning and socialist competition?

Answer: Evaluation of fulfillment of the 5-year plan on a cumulative basis from the beginning of the 5-year period not only makes requirements more strict with respect to the quality with which these plans are drafted, but also solves the problem of planning on the basis of what has been achieved. This orients collectives toward discovery and utilization of additional potential for ahead-of-schedule fulfillment of the plan. Stable 5-year plans

objectively promote development of democratic principles in management of the economy and a new upsurge of competition and counterplanning.

The new opportunities open to work collectives consist above all of the fact that annual plans are now drafted on the basis of the assignments and economic standards of the 5-year plan for the given year; it is put in the necessary detail, and measures that ensure fulfillment of the 5-year plan are worked out. This work is done from bottom up--by the production associations and organizations themselves, taking into account contracts with consumers and those reserves and capabilities which are opened up by socialist competition and counterplanning. The role of the movement of production innovators and inventors and other directions taken by the creative activity of the masses is growing in this context.

The principle that indicators must not be lower than the assignments of the 5-year plan approved for the relevant year is applied in drafting the annual plan. Once they have met this condition, enterprises, associations and ministries have broad rights to independently draft and approve the most important indicators of the annual plans.

To improve their soundness ministries and departments will in this very year and coming years devise new enterprise passports. They will contain data on the existence and use of production capacities, including information on the shift coefficient of equipment operation, the organizational and technical level, and the degree of specialization of production.

These passports will become the sole criterion in determining the potential and development of every enterprise. It will also create conditions for uniformity of the requirements which the plan must meet at all levels and will help toward full discovery of internal potential. The documents which have been adopted orient the workers and all collectives in this direction.

Final Results as a Criterion

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 4 Sep 79 p 3

[Article by L. Abalkin, doctor of economic sciences and professor, Moscow]

[Text] The conditions today for development of the Soviet economy differ essentially from those which prevailed just 15-20 years ago. The scale of production has grown many times over, profound changes have taken place in its structure, and economic relations have become considerably more complex. The selfless labor of the people has created a mighty economic and scientific-technical potential.

On the basis of a comprehensive analysis of the new conditions the party has framed the conclusion that the main thing today is the most optimum and efficient utilization of the potential that has been created and everything that the national economy possesses. This indeed implies the necessary

orientation of all levels of the economy toward the final results from the standpoint of the national economy. Managerial activity and above all planning activity must be oriented toward their achievement, as pointed out by the 25th CPSU Congress. The decree adopted by the CPSU Central Committee and USSR Council of Ministers to implement the decisions of the congress, which is entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance," represents a specific realization of that very important principle of policy.

What is the meaning of the final results from the standpoint of the national economy? First of all, the final results of production show the degree to which the needs of society and personal needs have been satisfied.

It is important to emphasize in this connection that needs are not satisfied by millions of rubles or tons, but by specific types of goods and services produced in the necessary assortment and of the necessary quality. Moreover, as a rule needs are strictly fixed in time, and therefore the fullness of their satisfaction depends to no small degree on consumers receiving the product on time. To rephrase a well-known saying, we might say that the sled is needed in the wintertime and the cart in the summer.

Second, from the standpoint of the national economy it is important not merely to produce the necessary amount of goods in the proper assortment and of the proper quality, but also to do this at minimum expenditure of resources.

The orientation of economic activity toward attainment of high final results is achieved through a system of planning indicators and through development of cost accounting along with its inherent levers and incentives.

Let us first take up the system of planning indicators. Today emphasis is naturally put on production indicators in physical terms. But this is not merely a mechanical shift: some indicators are moving into the foreground, while others "are receding" into the background. The very approach to physical indicators is undergoing essential change. Assessment of plan fulfillment will now depend on strict and full meeting of obligations concerning deliveries of products to specific consumers on the basis of contracts concluded or orders. The intention, then, is to adhere to the principle "full satisfaction of the demands of the consumers is the supreme criterion of the quality of economic performance."

The physical indicators themselves are also undergoing change. During this year and next year USSR Gosplan, together with interested ministries and departments, has been ordered to make adjustments in the system of physical measures of output in metallurgy, machinebuilding and also other industries. This is to be done on the basis of extensive use of scientifically sound technical-and-economic indicators, which make it possible to take into account efficiency, quality and other performance characteristics of the product.

Experience in recent years has confirmed in a convincing way that such indices as commodity output and sales do not orient production collectives toward attainment of high final results. Striving to increase them, enterprises, associations and entire ministries have willy-nilly bent toward increasing the output of materials-intensive products and toward the use of expensive raw materials. In this context the higher the materials intensiveness of the product, and the more expensive the raw materials and components, the more successfully the plan is fulfilled and the higher are the growth rates. At the same time, production efficiency is often lower, but this is of little concern to some business executives.

The way out of this contradiction has been found by "purifying" the volume of output in value terms to eliminate the magnitude of material costs. This is manifested in the use of the indicator of net (normative) output, which has confirmed its effectiveness during an experiment. From now on net output will become the principal indicator of the volume of production for ministries, associations and enterprises. The intention is to use this indicator extensively for measuring labor productivity and for planning the wage fund.

Though net output is in no need today of additional recommendations, there are a few clarifications that should be made. In Marxist-Leninist political economy the concept of "pure" categories occupies an important and firm place. It was K. Marx who in devising his economic doctrine introduced the terms "net product" and "net income." So the use of this indicator is based not only on pragmatic considerations, but is also thoroughly substantiated from a theoretical standpoint.

Moreover, the net output indicator is synchronized with the national income, which is used to measure the final results of development of social production. Achievement of high volumes of production of net output, then, assuming the necessary conditions are met (assortment and quality, price discipline), signifies the real contribution of work collectives to augmentation of the country's national income.

Inclusion of assignments for the growth of the output of products in the superior-quality category and for the size of the economic benefit achieved by carrying out scientific-technical measures in the system of planning targets is also related to the orientation toward final results.

Further development of cost accounting and enhancement of the role of economic levers and incentives occupy an important place in the set of measures to improve the economic system. First let us talk about the basic solution to this problem. The decree of the CPSU Central Committee and USSR Council of Ministers states that the cost accounting of production associations and enterprises will be based on the assignments of the 5-year plan and long-term economic standards. They are expected to guarantee a growth of resources left to their disposition as a function of improvement of the end results of economic performance. At the same time deductions paid into the state budget should also increase.

This is the basic statement of the conception. But how will it be done in practice? The results of the economic performance of production enterprises and associations will be evaluated, and their economic incentives will depend on four indicators:

- i. fulfillment of plans for deliveries of products according to the specific list (assortment) and on schedule in accordance with contracts concluded (orders);
- ii. the rise of labor productivity;
- iii. improvement of product quality;
- iv. growth of profit (in certain industries--reduction of production cost).

What we have said makes it clear that it is these "pillars," on which the present organization of cost accounting is based, that reflect the final results of the performance of the primary tier of the national economy--the production association or large independent enterprise. Two of them (delivery of products to consumers and product quality) reflect the level of satisfaction of needs, and two (labor productivity and profit) reflect the efficiency of utilization of resources.

The tremendous role of the labor productivity indicator, which will now be computed in terms of net (normative) output, in production planning and economic incentives, hardly needs to be substantiated. Something specific needs to be said about profit; its importance is growing substantially.

As a general expression of the results of economic and financial performance, profit will be planned as part of the 5-year and annual plans at all levels of economic management. It serves as the principal source of resources for forming economic incentive funds and an important and constantly growing source of revenue for the state budget. In accordance with the procedure that has been adopted, transfers will be made to the material incentive fund for the growth of labor productivity and higher product quality at rates fixed in percentages of profit (net profit).

Product quality has been given a special place in the new system of measures. This is understandable, since improvement of the final results from the standpoint of the national economy is inseparable from improvement of the quality of goods and services. Improved product quality will be encouraged in three ways. First, the material incentive fund will be formed from profit on the specific basis of the growth of the production of products in the superior-quality category (or some other indicator of product quality established for the given industry). These transfers will be made at long-term rates set forth in the 5-year plan.

Second, when there is a substantial increase in the output of a highly efficient new product for industrial and technical purposes and new consumer

goods transfers to the economic incentive fund, including transfers to the material incentive fund, will be made at higher rates. And if the assignments of the plan are not fulfilled, they will naturally be made at lower rates.

Third and finally, special supplements to the wholesale price will be established for highly efficient products (discounts from the wholesale price for output of products in the second quality category). This leads to the formation of additional profit. As much as 70 percent of it will go directly--that is, bypassing the general distribution channels--to the economic incentive funds of work collectives.

Thus a comprehensive system of organizational and economic measures have been devised to accomplish the reorganization of the economic system toward attainment of the best final results. Implementing it, as indicated by the party's central committee, is a major economic and political task.

At all levels of management--from central planning agencies and ministries to associations and enterprises--there is much painstaking work to be done. Work in which there is no such thing as a "trifle." The reason there are no trifles is that we are speaking specifically of measures which have been interrelated to form a unified complex.

We should especially emphasize the need to overcome inertia and the tradition of the purely quantitative "growth" approach to economic processes. Emphasis on efficiency and quality should for all practical purposes become the first commandment of economic management. This will open up the way to sound, uncompromising and--the main thing--effective control of low product quality, mismanagement in utilization of material resources, losses of work-time, disruptions in supply, tardy completion of construction and unjustified cost overruns.

Firm and consistent orientation toward final results is a pledge to a steady rise in production efficiency, more complete conformity of the development of production to the plan, and more dynamic development of production.

Effectiveness of the Plan

Moscow EKONOMICHESKAYA GAZETA in Russian No 38, Sep 79 p 5

[Unsigned article]

[Text] Given the multisector nature of social production, its dynamic development, and expansion of international cooperation the organizing role of the state plan is becoming extremely important. This makes it an objective necessity to improve the planning process and the organization and methodology of compilation of national economic plans. It is no accident that the problems of raising the level of planning work in the national economy were given a central place in the decrees of the CPSU Central Committee and USSR Council of Ministers on further improvement of the economic system.

"Improving the system of management is not a one-time effort," Comrade L. I. Brezhnev has pointed out, "but a dynamic process of solving problems raised by life." This also applies fully to planning, which long ago was rightly made the heart of management of socialist production. The forms and methods of planning and of drafting national economic plans, which reflect the character of production relations, from time to time have to be brought into conformity with the developing productive forces of society.

Planning is a complex decision-making process in the domain of economic, social and scientific-technical development. Thorough knowledge of the nature of economic processes and their interpretation in plans, a thorough reckoning of the needs of society and personal needs, of the prospects for scientific-technical progress, and of the development of the most important production operations and sectors of the economy, and reinforcement of the plans with the necessary reserves--these are all exceedingly important elements of planning technology whose observance guarantees internal consistency, proportionality, and ultimately the realism of plans, their stability and their effectiveness.

The effectiveness of the plan is a far-reaching concept. First of all, it means that goals in the remote and near future have been set comprehensively and clearly. The workers should master the ideas of the plan, and then it becomes a powerful material force for realizing the party's economic policy.

Further, the effectiveness of the plan refers to determination of priorities in development of sectors and industries on the one hand and of economic regions on the other so as to guarantee progressive changes in national economic proportions and to improve the efficiency of capital investments and of social production as a whole. It means singling out in the plan those tasks which have priority and which ensure realization of new technical solutions, development of large regions, and recovery of lagging areas.

Effectiveness of the plan means guaranteeing that economic development is stable and balanced, means systematically following the course of its accomplishment, and means that the plan contains reserves for on-the-spot maneuvers in economic development. Finally, it means that there is an organic relationship between the plan and its indicators on the one hand and socialist competition, an energetic form of mobilization of the workers toward successful performance of the tasks of the plan, on the other.

Planning is both science and art at one and the same time. Its effectiveness is determined by the ability to apply human, material and money resources through plans toward the most effective attainment of high final results from the standpoint of the national economy.

The Planning System

The decree implements the principle of the 25th CPSU Congress concerning improvement of the system of interrelated national economic plans--long-range, 5-year and annual.

As the transition is made from the long-range plan to the annual plan, plans are stated in greater detail and are assigned more specifically. For example, the targets of the first 5-year period will be strictly assigned in the main lines for economic and social development of the USSR over the 10-year period; they will be broken down by years. For the second 5-year period the targets are assigned in consolidated form, with a broader "fork" than for the 5-year plan. Assignments will be given in annual plans in the highest detail and most specifically.

The unity and continuity of long-term goals are common to all the plans. Moreover, the decisive role in planning the country's economic and social development, as the basis for organizing economic activity, is still given to 5-year plans, along with their breakdown by years. This is the principal form of planning for all levels--the entire state, sector and industry, and associations, enterprises and construction sites. The 5-year plan is the stable basis for drafting annual plans. All three types of plans are organically related to one another.

The long-range perspective is corrected by the 5-year plan, which in turn is corrected by the annual plan. The decree sets the task that the targets of the annual plan shall not be lower than the assignments of the 5-year plan for the relevant year, and fulfillment of the 5-year plan (and the annual plan) will be assessed on the basis of the cumulative total from the beginning of the 5-year period (or from the beginning of the year). This approach necessitates a considerable improvement in the quality of plans with respect to their internal consistency and their reinforcement in terms of reserves. So that 5-year plans are more sound, they will include the drafting and approval of balances of material and labor resources, production capacities, a financial balance and the balance of personal income and expenditures.

The comprehensive program of scientific-technical progress has a particular place in development of the system of plans. In the era of the scientific-technical revolution it is extremely important to keep pace with technical progress. Correct selection of the direction for development of sectors and industries and types of production operation and of technology today largely predetermines the character of production and economic proportions at the level of individual subsectors and branches of the sphere of material production. For that reason the comprehensive program of scientific-technical progress is essentially the point of departure for work on the long-range future. It is no accident that its time frame has been fixed at 20 years (up to the year 2000).

It is important to planning that this program reflect not only what science can do in a given time, but also that it give an orientation in solving the key problems of economic development over the foreseeable future. This applies above all to research plans of the basic and applied sciences. It is, of course, difficult to plan a discovery in advance, but it is not only possible, but indeed indispensable to foresee it. The extremely rapid development of science and technology will inevitably make corrections even in the

most astute plans. Provision has therefore been made for the comprehensive program to be revised every 5 years, and its time frame will be extended by another 5-year period. This is extremely important to making 5-year plans more effective.

Special-Purpose Programs

By virtue of their intrinsically and organically inherent traits and patterns, our plans are comprehensive plans which simultaneously combine the solution of economic, social and scientific-technical problems, problems in both the sectoral and regional domains, and also problems which are intersector and problems which are intrasector in nature. This is understandable, since the USSR national economy, given social ownership of the means of production, is by its organizational and economic structure a unified national economic complex of sectors, of the economies of the union republics and of major economic regions.

At the very dawn of the evolution of socialist planning V. I. Lenin wrote: "All the plans of individual production sectors should be strictly coordinated and related, and together should make up that unified economic plan we need so badly." It is precisely in this direction that our planning is developing. As the set of planning instruments is perfected, comprehensive national economic plans will be compiled to an ever greater degree by the normative method and by a balance correlation of production and consumption.

The decree sets the course toward a greater role of standards in planning. The idea is that 5-year plans will contain stable economic norms differentiated by years: the wage fund per ruble of output, the economic incentive fund, distribution of profit, etc.

The comprehensive approach in planning is supposed to be enhanced by the drafting of programs for the most important intersector or major economic decisions, whose purpose it is to supplement the sectoral and regional breakdowns of the plan and to promote in every way the performance of tasks to strengthen planning aimed at specific goals. The program constitutes a set of organizational, economic, social and technological measures ensuring achievement of particular goals within the framework of the plan. It is important to note that these programs are being worked out as part of the nationwide plans, and not as a supplement to them. The drafting of the programs is one of the directions for raising planning to a qualitatively new level and an important condition for the purposiveness and effectiveness of planning in solving the problems of building communism.

We have already acquired certain experience in drafting comprehensive special-purpose programs. These are the programs for development of the petroleum-bearing region of Western Siberia, for space explorations, for development of nuclear power, etc. The task now is to work out more thoroughly many other long-term programs which have priority significance.

Gosplan has been ordered to draw up a list of the relevant programs, drafting procedures and dates for their compilation. The programs fix attention on the key problems, define the sequence and stages for solving them, help in precise statement of the resources needed for this, and also help to coordinate the joint activity of sectors and economic regions in achieving the goals which have been outlined. It is quite obvious that the number of programs in the plan should be limited to those of them which are the most fundamental and important. Such programs include, for example, the programs aimed at meeting the country's needs for fuel and energy, all types of metals, mechanization of manual labor, development of the BAM [Baykal-Amur Trunk Rail Line] zone, expansion of production and renewal of assortment of consumer goods by all industries, etc.

Combination of the Sectoral and Regional Aspects

Further improvement of the interrelationship between the breakdown of plans by sectors and industries and by regions is an important direction for making plans more effective. The decree sets the course toward more comprehensive economic development in a particular region and enhancement of the role of local authorities in this important matter. At the same time the rights of ministries in managing development of sectors and industries have been expanded.

The purpose of this approach is specifically to ensure better utilization of resources, interrelated development of production operations involved, and solution of problems of protecting the environment. Without proportional and interrelated development of the enterprises of different sectors and industries in every republic, kray and oblast it is impossible to achieve optimum utilization of labor, material and financial resources, and the requisite balance cannot be achieved in the national economy as a whole. Thus optimum combination of the sectoral and regional principles is an important condition for improving the efficiency of economic performance. It is especially important today to combine sectoral and regional planning in the regions of Siberia and the Far East, where tremendous work is being done to shape a number of large regional industrial complexes and to develop the BAM zone.

The problems related to a better combination of sectoral and regional planning necessitate organizational reinforcement and improvement of the performance of regional divisions of USSR Gosplan and republic gosplan and more attention to this area by sectoral ministries. The latter are expected to draft plans not only with respect to the sector or industry as a whole, but also in regional terms and to monitor progress in their fulfillment.

There is a need to establish closer relations between ministries and local authorities, especially planning agencies, which to an ever degree will be concerned with economic development in the region regardless of the subordination of enterprises. Thus there will be broader participation of councils of ministers of union and autonomous republics and executive committees of

Soviets of People's Deputies in working out optimum solutions beginning in the stage of compiling the draft plan.

With their help ministries should work out schemes for development and location of the sectors and industries of the national economy. Only by working jointly with regional planning agencies can ministries successfully apply the indicator of the ceiling on the number of workers and employees. Together with the union republics they will in future work out regional balances of the production and consumption of the most important products, as well as plans of contract work.

Moscow, Leningrad, Krasnoyarskiy Kray, Sverdlovskaya, Tyumenskaya and a number of other oblasts have acquired experience in drafting comprehensive 5-year and annual plans of economic and social development covering all enterprises and organizations within their jurisdiction. Their constructive experience should be disseminated everywhere. Local agencies have a responsibility to compile and improve summary plans of the output of consumer goods and plans concerning construction of housing and municipal, cultural and consumer service facilities and to monitor their fulfillment.

In future, when passports will have been prepared for each enterprise and association, local planning agencies will be able to exert a serious influence toward improvement of utilization of production capacities, the shifting of machine (machine tool) time to meet the needs of related enterprises, and the working out of proposals concerning their specialization.

All these new tasks necessitate development of initiative on the part of local authorities and a higher level of performance on the part of industrial, construction and transportation ministries in strengthening the regional breakdown of planning and in reinforcing plan discipline, the orientation being toward ensuring fulfillment of the plan by sectors and industries not only for the ministry as a whole, but also in regional terms. This also applies, of course, to obligations under contracts.

Followup on Fulfillment

Followup on fulfillment of plans by planning and economic agencies is an inseparable part of the organization of planning. "It is necessary," V. I. Lenin wrote, "that economists, writers and statisticians not babble about the plan in general, but study in detail the fulfillment of our plans, our errors in this practical effort, and methods of correcting these errors. Without this kind of study we are blind."

Followup and assurance of fulfillment of national economic plans is becoming especially important under present conditions, when the party and government have launched the task of strengthening the impact of the economic system toward higher production efficiency and quality of performance and of doing everything to strengthen plan discipline.

The principal purpose of following up on plan fulfillment is to discover in good time and prevent possible disproportions, to discover and put to use neglected production potential; in other words, to make corrections in good time. It is the responsibility of USSR Gosplan to perform the functions of monitoring fulfillment of state plans by USSR ministries and departments, union republics and enterprises and organizations. In spite of the great amount of experience that has been gained, there is a need for further improvement of this part of planning work. This especially applies to utilization of existing production capacities, addition of new capacities, attainment of design capacity at new facilities and organization of the production of new products. Ministries, departments and union republics are in turn expected to organize matters in such a way that plans of their subordinate enterprises are fulfilled with maximum benefits both in quantitative and also qualitative terms.

Improvement of the quality of plans is an indispensable condition for making plans more effective. In large part this depends on the activity of USSR Gosplan, which is the country's principal economic headquarters. Under the decisions which have been taken its rights are expanded, and its coordinating role with respect to central economic departments and ministries has been enhanced. At the November (1978) Plenum of the CPSU Central Committee it was emphasized that USSR Gosplan needs to provide conceptions of many economic problems and find optimum approaches to their solution, combining high responsibility with initiative and creative boldness.

The decrees adopted by the party and government provide for still greater expansion of participation of work collectives in drafting 5-year and annual plans and also in monitoring progress in their fulfillment.

When planning is done "from bottom up" (as the point of departure for compilation of plans) associations and enterprises are given an opportunity to independently determine a broad range of indicators and to devise counterplans on the basis of the assignments of the 5-year plan. Counterplans are organically incorporated into the system of planning and are a form for active participation of the workers in management. Workers, engineers, technicians and employees, through general assemblies, standing production conferences and other forms of creative associations of the workers, are helping to discover potential, to reveal "bottlenecks" and shortcomings in production and economic activity, and are thereby helping to devise ways of fulfilling planning targets with maximum efficiency.

Thus compilation of plans and followup on their fulfillment are for us the business of all the people and the concern of every work collective.

Fuller Utilization of Capacity

Moscow EKONOMICHESKAYA GAZETA in Russian No 38, Sep 79 p 7

[Article by S. I. Ibraimov, chairman of the Kirgiz Council of Ministers]

[Text] The workers of Kirgiz SSR, like the entire Soviet people, have received with great satisfaction the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance." Work to prepare for its practical implementation has begun in the republic. In this article I would like to dwell only on two issues which have been given a distinguished place in the decree. I am referring to improved utilization of capacities and industrial application of new equipment and technology.

What Experience Shows

Improved utilization of capacity is a key task in improving the output-capital ratio. The experience of advanced enterprises convinces us that success in this matter is being achieved by those collectives which are systematically and consistent with planning principles carrying out an integrated set of organizational, technical and economic measures aimed at bringing new capacities up to design indicators ahead of schedule, at modernization of equipment, at the training of personnel, and at improvement of the workers' living and working conditions.

But this is only one aspect of the matter. The other and equally important aspect is organizing effective competition for bringing production facilities up to rated capacity ahead of schedule. This should be organically incorporated into that set of measures carried out to achieve this goal.

This organic connection is achieved mainly by including indicators that reflect the level of utilization of equipment in the system of criteria for evaluating performance of the competitors. This is the practice of many of the republic's advanced collectives. Indicators of utilization of equipment in shops and sections are included in the commitments of participants in socialist competition. Inclusion of this indicator is reinforced by clear planning and by implementation of relevant measures.

At the Frunze Electronic Computer Plant one of the principal conditions of the competition of personnel of divisions and staff services is now to determine the economic benefit from realization of organizational-and-technical and economic measures aimed at exceeding the designed productivity of equipment and at attaining rated capacities ahead of schedule. The economic benefit in the plant's subdivisions is recorded quarterly. A measure is considered to have been carried out when there is a certificate concerning its performance on schedule. The plan for adoption of measures is considered fulfilled if the number of measures envisaged has been performed and

the relevant economic benefit has been achieved. The result of this approach has been that the output-capital ratio has risen 29.4 percent over the last 3 years. This has been accompanied by a rise in labor productivity. Since the beginning of the 5-year period it has almost doubled, having risen 99 percent.

A similar system has been developed in the Frunze association Sel'khozremont. This association is now one of the highly mechanized associations in Kirgiz SSR. The annual rise of its output-capital ratio is 4 percent, and labor productivity is rising at a rate of 8 percent.

Machinebuilding and metal manufacturing are developing at a fast pace. The volume of production of this industry is increasing 10.5 percent in this year alone and 46 percent for the 4 years of the 10th Five-Year Plan. This is more than envisaged by the assignments of the 5-year plan.

Enterprises of the Ministry of Food Industry have also achieved good results in utilizing of production capacity. Design capacities have been exceeded at most of them. Every year the output-capital ratio rises 2-3 percent at these enterprises.

Take, for example, the Kant Sugar Mill. In 3 years its collective has exceeded the sales plan by 2 million rubles. The plant overfulfilled assignments for the rise of labor productivity and reduction of production cost. Actual output is twice rated capacity, and the average annual utilization of capacities is considerably higher than the targets assigned. In recent years practically all the technical-and-economic measures aimed at improved utilization of capacity that have been developed have been introduced at the plant. These measures are backed up with material and financial resources, and there is strict personal responsibility for their fulfillment.

On the Basis of Scientific-Technical Advances

Work to improve utilization of capacities is being done in close relation to the application of scientific-technical advances. In the 3 years of the 10th Five-Year Plan Kirgiz enterprises have carried out more than 15,000 measures related to new engineering and technology, mechanization and automation of production processes and organization of new models of industrial products, which is 1.5-fold more than in the first 3 years of the Ninth Five-Year Plan. Performance of these measures has brought an economic benefit amounting to about 90 million rubles, which is 1.8-fold more than the corresponding years of the previous 5-year period. At the Mayli-Say Electric Lamp Plant, for example, the economic benefit from performance of measures related to new engineering and technology amounted to more than 1 million rubles in 3 years, at the Issyk-Kul'skiy Production Association of Electrical Equipment Plants it was 615,000, and at the Frunze Agricultural Machinebuilding Plant it was 860,000 rubles.

Measures related to new engineering and technology have done much to promote more efficient utilization of capacities: for example, at the Frunze and Osh motor vehicle repair plants, the Min-Kush Orgtekhnika [office machines] Plant, the pilot plant for electric vacuum machinebuilding, the Mayli-Say Electric Lamp Plant, the Kyzyl-Kiya and Ivanovka building materials combines, the Osh Silk Combine and other enterprises.

Problems related to application of new engineering and technology are regularly discussed at sessions of the council of ministers of the republic, during which specific measures are outlined to correct the shortcomings that exist. Most ministries, departments and enterprises in Kirgiz SSR are successfully performing the measures established in the plan concerning scientific-technical progress. We must admit, however, that this very important factor in raising production efficiency is not being fully utilized everywhere.

For instance, the republic's Ministry of Construction and Ministry of Trade and the Kirgiz Potrebsoyuz have not fulfilled 3-year plans for practical application of scientific-technical advances. Work related to full mechanization of acceptance, storage and intraplant movement of flour without containers and full mechanization of the movement of potatoes and vegetables in containers from the field to the storage facility has dragged on intolerably long, for example.

The problem is still very acute with full mechanization of labor in auxiliary operations. Steps are now being taken to radically improve this situation. Within the commission for promotion of scientific-technical progress of the Kirgiz CP Central Committee a section has been created for mechanization of manual and heavy labor, whose purpose it is to coordinate the efforts of collectives in this area. Gosplan, Goskomtrud [State Committee for Labor and Social Problems], the Kirgiz Academy of Sciences, the Kirgiz Trade Union Council and the republic council of scientific and technical societies have drafted "Methodological Recommendations To Aid Heads of Ministries, Departments, Industrial Enterprises, Construction Organizations, and Party, Trade Union and Komsomol Organizations in Mechanizing Manual Labor in the Economy of Kirgiz SSR." An economic experiment is being conducted in accordance with these recommendations at three plants. The issuing of passports for work stations has been completed, and those where manual labor is predominant have been determined. On the basis of the data obtained a program will be drafted for full mechanization of manual and heavy work, which will be an integral part of the republic's plan for economic and social development in the period 1981-1985. Many steps in this direction are being taken even now, but implementation of the comprehensive program will make it possible for us to greatly improve the situation in this very important area.

When Planning Is Not Precise

One of the fundamental problems is planning the load on production capacities. After all, the republic's fixed productive capital will increase by

more than 44 percent in the years of the 10th Five-Year Plan. In the light of the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improvement of Planning and Enhancement of the Effect of the Economic System Toward Higher Production Efficiency and Quality of Performance" a great amount of work is to be done to balance production plans with supplies and raw materials. Unfortunately, we now have cases when utilization of existing production capabilities is poor.

Take, for example, the Sokulukskiy Torgmash Plant of Minlegpishchemash [Ministry of Machinebuilding for Light and Food Industry and Household Appliances]. Though there is a considerable reserve of capacity, year after year it is not attaining the level of the 5-year plan with respect to the volume of production. For instance, for 1978 it was assigned a target of 4.15 million rubles less than that envisaged by the 5-year plan. The question of the load on its capacities has not been resolved this year either. The republic made a recommendation that a start be made in 1979 to organize the production of camp stoves, whose production technology is similar to that of gas ranges, so that in 1980 it could make the full transition to their manufacture. But Minlegpishchemash is holding up on settlement of this issue. The situation is similar at the Frunze Monitoring and Measuring Instrument Plant. These two enterprises of Minlegpishchemash fell short of the assignments of the 5-year plan by 8.6 million rubles in 1979.

An insufficient load is being put on production capacities at the Tyazhelektromash Plant of Minelektrotekhprom [Ministry of Electrical Equipment Industry] as well. In 1976 a production building with 5,600 square meters of floor space was put into operation at that plant. But output at the plant has not increased since then. The reason is that the association Soyuzelektrotyazhmash very often planned for the plant the manufacture of products which were not in demand, did not supply the components for the production program, and made repeated changes during the year in the plan that had been approved.

The plant might produce this year, say, 210,000 voltage regulators for color television receivers. These voltage regulators, for which there is a demand, have been produced on a series basis by the enterprise since 1977. But Minelektrotekhprom does not allocate it the necessary quantity of components. As a result the plant has been forced to organize production of another model of a voltage regulator--the SN-250. The SCV generators which the association recommended for production are not in demand either, and the plant was forced to shift to the manufacture of another product. This example sketches out a picture of low responsibility on the part of the directors of the industrial association for the taking of managerial decisions.

At enterprises of the building materials industry utilization of capacity has improved in the production of cement, clinker, brick, nonmetallic building materials, ceramic pipe and tiles. But capacities for the production of asbestos-cement pipe and sheet (shingles) is still underutilized. The right which the decree we have mentioned of the CPSU Central Committee and USSR

Council of Ministers has accorded to councils of ministers of union and autonomous republics and executive committees of kray, oblast and city Soviets of People's Deputies to compile and approve summary 5-year and annual plans for production of local building materials will help to solve this problem more effectively and quickly.

Building on a Comprehensive Basis

And one other question I would like to discuss. Not infrequently production capacities of enterprises are underutilized because central and republic authorities undertook their construction without coordination. The Osh Textile Combine can serve to illustrate this point.

Its construction was completed back in 1975. But even today we cannot say that everything has been done here. The combine was designed for operation on two shifts. But a number of facilities related to social and cultural services, consumer services and housing were omitted when it was built. About 100,000 of the 123,000 meters of residential floor space called for by the design have been built. Of the 1,350 places provided for in children's institutions, 2,120 in schools and 250 in restaurants and cafes, about half have been put into service. No funds whatsoever were allocated to build a polyclinic, a lying-in home, a club, an athletic complex and a number of other social and everyday-service facilities.

This considerably limits the opportunity to staff the combine with workers for operation in two shifts. We must say that certain steps are being taken to improve the housing and living conditions of the workers. For instance, in 1979 2.2 million rubles were allocated for these purposes from the resources of the USSR and republic light industry ministries. But the combine needs more help. It is above all the responsibility of the USSR Ministry of Light Industry to find a way of making an additional allocation of funds for coming years to build several tens of thousands of square meters of residential floor space, 6 nursery schools each with a capacity of 280, 2 schools each with a capacity of 1,176, a vocational and technical school with a capacity of 1,200, and a number of other social and cultural facilities costing roughly 30 million rubles.

A difficult situation has also come about at the Tokmak Wool Spinning Factory. This enterprise cannot operate at full capacity because it lacks certain manufacturing equipment. For example, only 900,000 Savio bobbins were allocated, though 1.7 million are needed, 750,000 65-group paper tubes were allocated, though 500,000 were needed, and 1,125 carts for steaming yarn were requested, but not a single one has been allocated.

Unfortunately, these examples are not isolated. In his speech at the November (1978) Plenum of the party central committee Comrade L. I. Brezhnev emphasized that a real change of direction toward efficiency begins with planning. This instruction is fundamental to solving any economic problems, including the problem of improved utilization of production capacities. The measures which we take locally will, we hope, be carried out with the help of the relevant ministries and departments.

IMPROVED PLANNING AND MANAGEMENT OF PILOT PRODUCTION

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 8, Aug 79 pp 103-108

[Article by G. Lakhtin, doctor of economic sciences, and G. Glagoleva, candidate of economic sciences]

[Text] If we analyze all the links in the complicated chain that connects science to production, L. I. Brezhnev noted at the 25th congress, it is not difficult to see that the weakest links are those having to do with practical realization of the advances of science, with their application to large-scale production. One of these links is pilot production, whose purpose is to check out new technical solutions under production conditions and apply the finishing touches. Speeding up the application of scientific-technical advances depends largely on solving a number of economic, organizational and other problems in development of pilot production.

The value of the product of pilot production is not primarily manifested in use values proper, but in that information which has been obtained in the tests. This peculiar and specific economic nature of the product of pilot production confirms the need to regard it as an independent link. At the same time, it involves a number of practical questions of considerable importance: in what units shall pilot production capacities be measured, with what indicators shall performance be evaluated, in what respects shall it be governed by assigned standards, and so on.

At the present time in the USSR there are about 3,000 experimental facilities of scientific institutions (including the experimental facilities of VUZ's) with a total staff of more than 650,000 persons. There are more than 5,000 pilot-experimental subdivisions (shops, sections, workshops, etc.) at industrial enterprises. The total work force of laboratories, design and experimental subdivisions of industrial enterprises is 1.4 million persons--4.4 percent of the total work force of the industrial sector in the USSR. More than half are engineering and technical personnel.

In spite of the considerable development of pilot-experimental production over the past decade, the situation in this area is still in need of great improvement, since many scientific research institutes still do not have

pilot-experimental facilities. Only 30 percent of design organizations with their own balance sheet have pilot production subdivisions.

Yet neither the total number of pilot production installations, nor the percentage of enterprises and institutions which have such installations is able to indicate their adequacy. In many cases the existing pilot installation is capable of meeting only a part of the needs of the institute or plant it serves. Moreover, it is not uncommon for the production capacities of the pilot installation to be used to manufacture a series-produced product or to fabricate nonstandard equipment.

For purposes of determining the amount of experimental and pilot operations we should bear in mind that the results of the activity of scientific research institutes (design bureaus) are not measured quantitatively. We need to compare the amount of work in terms of estimated costs (i.e., instead of the results compare the costs) or compare the size of staffs. In that case the standards that would determine the amount of pilot production work would look like this:

- i. amount of pilot production work (in estimated cost) per 100 rubles of expenditures for research and development;
- ii. number of workers in pilot production per 100 permanent staff members of the organization doing the development.

When standards like these are used, it is costs which are compared, not results. We need, then, to apply as well standards which pertain to the last link (production). This can be done only in sufficiently large volumes of statistical data, when individual differences are smoothed out in relations between pilot production and production proper. It would seem that for large-scale evaluations (entire industries) one could derive ratios between the value of fixed capital of pilot production and production proper; between the number of production personnel proper in pilot production and production proper; between the volume of pilot operation (in value terms) and the value of the commodity (marketed) output.

The last indicator is the most interesting one. It is an economic proportion which in consolidated terms reflects the adequacy of the pilot production the industry has at the present time. This indicator should reflect the industry's need for pilot operations in a given stage of scientific-technical development and could serve as a consolidated criterion of their adequacy.

In connection with the problem of developing the pilot production link we should discuss such methodologically important categories as the output and capacity of the pilot installation. It is not its function to manufacture physical products for the market. The principal result of pilot verification and finishing are the improved accuracy and reliability of data obtained by researchers and developers, i.e., the improved likelihood that the

expected technical and economic benefits will be achieved in large-scale adoption. Moreover, another result of the activity of pilot production is also possible: when during the checkout and finishing in pilot production the parameters of the innovation being checked are so improved as to yield an increase of the technical and economic benefit beyond that determined by the developers. These two types of results constitute in essence the principal end product of pilot production.

In this light it is obviously wisest to examine the capacity of the pilot installation on the basis of the output of this operation in physical units assuming average conditions for pilot production (that is, taking into account time and labor spent on readjustment, debugging, and so on, for each separate development).

But in addition to the quantitative aspect, we must also examine the qualitative aspect of the organization of pilot production. In our opinion the following principles should be basic to technical policy in this field:

- i. pilot installation should be designed and built together with new construction;
- ii. spare capacity in terms of installed equipment should correspond to spare production space;
- iii. orientation toward the future technical level of the production operation being served; capability of reproducing processes which are just being developed or are scheduled for development;
- iv. mobility and maneuverability of pilot installations, affording the possibility of experimenting with variation of process parameters within wide limits;
- v. compatibility of test stands and installations so that there is a possibility of recombination and reproduction of new flow patterns.

Other requirements to be met by pilot installations are determined by the specific nature of the industry and scientific-technical considerations and may vary greatly.

The position occupied by pilot production as a link between science and production imposes special requirements on the organizational aspect as well.

An important prerequisite for straightforward definition of the organizational and legal status of pilot installations of various types is that an optimum classification be devised. Nor has a Regulation on the Pilot Enterprise, which is causing no small additional difficulties.

In our opinion a pilot installation should be defined as an enterprise or section checking out and finishing R&D results under industrial conditions;

the fabrication and testing of experimental and final prototypes of the new product; manufacture of trial lots of new products; verification and refinement of new manufacturing processes, monitoring systems, and equipment for mechanizing and automating the production process.

A pilot installation may at the same time have a part to play in introducing the results of research and development, in organizing new production operations, and in debugging new manufacturing processes; it may develop and fabricate initial sets of gear, special tools and accessories for production of the new product; it may train engineering and technical personnel and production workers; and it may support the research and development process.

When classifying the functions performed by pilot installations we must also bear in mind the possibility of their manufacturing a product on a series basis. This frequently happens when pilot operation is lengthy--having refined the design and the technology for manufacturing prototypes of the new piece of equipment, the pilot plant continues to manufacture the product, but now on a series basis. In other cases small-scale manufacturing is simply dumped on the pilot installation (this is mainly characteristic of pilot installations which are part of industrial enterprises and associations). This is favored both by the system of planning, which includes commodity output of the pilot installation (volume of sales) in the relevant indicators of the parent organization, and also by the incentive system, which motivates personnel to shoot for volume targets. It is evident that volume indices which are typical of series manufacture are best eliminated from the performance indicators of a pilot installation, and the output of the pilot installation should be recorded separately.

Efficient use of the available pilot production potential depends on improvement of the present economic mechanism. The main lines of improvement of economic methods of managing pilot production are these: improvement of the planning and financing of pilot production, transition to a system of start-to-finish and special-purpose planning on the basis of job orders and use of start-to-finish chart schedules for the creation of new equipment and preparation of its production, optimization of material worker incentives, and transition to the new system of planning and incentives (using the experience of Mintyazhmash [Ministry of Heavy and Transport Machinebuilding], Minsel'khoz mash [Ministry of Tractor and Agricultural Machinebuilding] and Minkhimprom [Ministry of Chemical Industry]). The problems of creating economic incentive funds (the procedure for their formation, procedures for their use, and economic norms), determination of the share of pilot installations in the economic benefit from creation of new technology, and evaluation of their activity require particular attention.

In the field of planning pilot installations it is very important to work out a system of planned standards, including consolidated standards governing expenditures of resources per research unit (standard part, assembly, device, and so on), as well as standards governing utilization of equipment so as to take into account that work which is specifically experimental and preparatory.

Plans governing pilot operations are a part of plans for research and engineering development of new products and manufacturing techniques and improvement of existing ones. At present the fabrication of experimental prototypes of new products, preparation of production of the first industrial lots of such products and subsequent production are planned piecemeal, there is no correlation of the times of the individual stages in the framework of the cycle for creation of new technology. Experience in special-purpose start-to-finish planning on the basis of job orders in the electrical equipment industry and other industries demonstrates the effectiveness of this system. In recent years a time reduction averaging 10-15 percent or more has been achieved in the electrical equipment industry as a whole in the following cycle: exploratory and applied research--preparation of technical documentation--preparation of pilot production of the first batch of the product.

Universal conversion of pilot installations to the new system of planning and economic incentives has become an urgent matter. In 1972 pilot enterprises of Mintyazhmash switched over to the new conditions, which had been approved by the Interdepartmental Commission. Under those conditions formation of incentive funds was made dependent on growth rates of sales of the product of the pilot production operation and balance-sheet profit--the rates of transfers to funds are applied to every percentage of growth of sales resulting from pilot production and every percentage point of growth of profit. This procedure makes the personnel of pilot installations more interested in conducting experimental work. Since adoption of the new system at pilot enterprises of Mintyazhmash there has been an increase in the relative share of pilot-experimental work in the total volume of production of these enterprises, and a closer linkage between pilot plants and institutes has come about concerning fulfillment of the project plan. Pilot enterprises of Minkhimprom and Minsel'khoz mash have converted to the same conditions of economic performance. But the principles of the new system of planning and economic incentives are not altogether realized in the new system. The source of resources of economic incentive funds is the profit of the pilot enterprise itself, and not the economic benefit attained at enterprises applying the innovation that has been checked out.

Transition to use of the benefit obtained from production and use of the new equipment (receiving its finishing touches in a given pilot installation) as the fund-regulating indicator and principal source of formation of incentive funds should become an important step in developing the economic mechanism for managing pilot production. Then these funds would be formed on the basis of the following: the profit realized from performance of pilot-experimental work; profit from sale of other products; transfers from profit (saving) resulting at enterprises of the industry as a consequence of actual reduction of the cost of producing the product when the results of the pilot-experimental work are used; transfers from additional profit obtained by virtue of supplements to wholesale prices on new (modernized) models of a product whose parameters and indices equal or surpass the best Soviet and foreign exemplars.

Transfers to incentive funds should be made at reduced rates when deadlines for completion of pilot-experimental work are missed and when qualitative targets are not met. The rates of transfers from a profit realized from performance of pilot-experimental work and the profit from sale of other products (including series-produced products) should in our view be set separately.

Transformation of the economic benefit at the enterprise applying the innovation into a fund-regulating indicator for the pilot installation raises the problem of quantitative assessment of the share of the pilot installation in the benefit achieved. There is no single normative procedure for allocating the benefit among the individual parts of the process of creating new technology. In the economics literature there are a number of methodological approaches to allocating shares in a total saving,¹ since the economic benefit from application of the results of research is the overall result of activity of research, project planning, design and pilot production organizations, as well as manufacturing enterprises.

The shares have to be determined in order to avoid multiple recounting of one and the same total saving, which is the current practice, and also so as to correctly evaluate the contribution of all participants in the process of developing and creating new technology. Ascertaining that portion of the economic benefit of a scientific-technical development which should be credited to pilot production is one of the most complicated and little-studied problems.

The methodological approach to solving this problem we suggest consists in the following. The results of the checkout and finishing under pilot conditions are these: first, confirmation of the benefit revealed in the previous (development) stage; second, a possible enlargement of the benefit thanks to improvement of the technical-and-economic parameters of the innovation during the refinement process. But to simply divide this benefit in proportion to the costs of each effort in creating an innovation would be unfair, since their contributions differ in the level of creative participation. We can assume that the pilot installation is not making a creative contribution with respect to a benefit confirmed, and therefore its share should be reduced by applying a factor less than unity: for example, 0.5. The second benefit is achieved entirely in the pilot installation. The scheme proposed for forming transfers to incentive funds of the pilot installation can be expressed by this formula:²

$$O = N(K_1 K_2 E_0 + E_{op}),$$

in which O --size of the amount transferred;

N --rate of the transfers;

E_0 --principal economic benefit of the innovation, determined in the stage of development and confirmed during the checkout under pilot conditions;

K_1 --share of the costs of the pilot installation in the sum total of preproduction costs;

K_2 --coefficient of the pilot installation's contribution;
 E_{op} --additional benefit thanks to improvement of the parameters of the innovation during the checkout and finishing under pilot production conditions.

In the context of the new system of planning and economic incentives the system of indicators for evaluating the performance of the pilot installation should be revised. The following principal planned indicators of the performance of pilot enterprises with their own balance sheet are recommended: the volume of pilot operations in physical terms; the volume of sales of the output of pilot production; labor productivity in manufacturing the product of pilot production;³ the sum total of the annual economic benefit (from applied results); sum total of balance-sheet profit; wage fund; technical-and-economic level of the product of pilot production; the rate of transfers to economic incentive funds; the volume of deliveries of materials and equipment; payments into the budget and appropriations from the budget; volume of centralized capital investments (including the volume of construction and installation work and fixed capital put into service).

The specific nature of pilot operations (their newness, their nonrecurrent nature, and so on) makes it a necessity to involve highly qualified personnel capable of performing a variety of production operations with a high degree of accuracy. But the work of workers in pilot installations is remunerated at a lower level than the work of workers in the same categories in series production (in a number of pilot installations the difference is almost 15 percent).

Wage rates (salaries) should in our view be raised somewhat higher than those set for workers and engineering and technical personnel employed in industrial enterprises manufacturing a similar product on a series basis so as to attract qualified workers into experimental production and improve their material incentives.

Bonuses would best be paid to the workers of pilot installations for performance of experimental operations and for delivery of experimental prototypes in the assigned assortments, by the deadline which has been set, and meeting all the technical-and-economic parameters and quality requirements in conformity with the technical assignment. Reduction of the planned normative costs and times for performance of experimental operations and also improvement of the quality of experimental prototypes created should become the specific qualifying conditions for bonuses of personnel in pilot installations.

In our opinion solving these problems related to improvement of economic methods of managing pilot production will help to make it more effective and will speed up rates of scientific-technical progress.

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2. The figures for calculation of the economic benefit are taken from engineering and working specifications, the technical certificates covering new products, and so on. The last computation of economic benefit done in the scientific sphere pertains to the results of testing the experimental prototype (series) when a new product is recommended for series production. In this case the initial indicators are taken from the results of the tests (the program for testing an experimental prototype must make provision for obtaining the technical and economic parameters and other information indispensable to calculating the economic benefit).
3. In our view adoption of these indicators would be conducive to increasing the volume of output of pilot production, since in a number of cases as much as 50 percent of the work done at certain pilot enterprises is not directly related to development of new technology.

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EFFECTIVENESS OF ECONOMIC LEVERS, INCENTIVES

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/Article by V. Sitnin: "Increasing the Effectiveness of Economic Levers and Incentives"*/

/Text/ The need for the more skillful use of economic levers and incentives: cost accounting, the profit, the price, the bonus, in the management of the economy was indicated at the 25th CPSU Congress.

In past years much has been done in this direction. Cost accounting, which became primarily the cost accounting not of individual enterprises, but of large economic complexes--the production associations--became more full-blooded. Along with the production units it covers scientific research subdivisions, design and planning organizations, integrally linking science and production. The experiment begun by the Ministry of the Electrical Equipment Industry in the area of the stimulation of scientific and technical progress has yielded favorable results. Much attention is being devoted to questions of the organization of cost accounting within associations.

The establishment of a direct link between the amounts of the economic incentive funds, the payment of bonuses to the management staff and the progress of fulfilling supply contracts promoted the tightening up of contractual discipline at many enterprises.

However, in the economic mechanism the economic incentives and levers are still not being taken full advantage of.

It is known that economic incentives and levers are of a value nature. Consequently, their effectiveness largely depends on the economic validity of the prices in which they are expressed. Objectively the price should approximate more and more the socially necessary labor inputs, should express them, be the instrument of their measurement and at the same time actively influence their reduction.

* Some of the questions raised by the author are presently being solved favorably.

In this connection the question of combining the mobility, the flexibility of prices with their stability is acquiring particular importance. The mobility of prices is inevitable, since the socially necessary labor inputs themselves are mobile. On the other hand, the stability of the plan, many indicators of which are expressed in prices, requires the relative invariability of prices. This contradiction can be resolved only by the planning of prices and the consideration of their dynamics in the plans and its indicators.

The planning of prices is necessary especially as prices act as a measure of production efficiency and, consequently, changes in the level of prices reflect to some extent the achievements in the increase of efficiency.

The long-range and five-year plans, as a rule, do not take into account the need for the timely change in prices, for every change in prices requires the making of changes in the plans, is painful and evokes a negative attitude of both planning and financial personnel and management personnel. This is the main reason for the inadequate utilization of prices in the economic mechanism.

It is known that indices of the reduction of wholesale and retail prices were established back during the drafting of the First Five-Year Plan. These indices were not a simple appendix to the plan, but were integrally coordinated with other indicators, above all such indicators as the change of the production cost of a product, the increase of labor productivity, that is, they expressed the increase of production efficiency. Since that time little attention has been devoted to the indicators of the change of prices in planning for a number of reasons. Long-range price indices were again elaborated during the Ninth Five-Year Plan, but they remained as if an external appendix to the plan, were not in essence coordinated with it and for that reason did not play any role in the improvement of planning. Such indices were also not calculated during the drafting of the plan of the 10th Five-Year Plan.

It seems that when drafting the long-range plan for 1980-1990 and subsequent years it is necessary to provide for the change in the level of wholesale and retail prices for the main types of raw materials, fuel, materials and finished items.

It is especially important to do this when determining the prices for the main types of raw materials and fuel. As L. I. Brezhnev has indicated, the demands of the country for energy and raw materials are constantly increasing, while their production is becoming more and more expensive. Evidently, the compilation of an effective long-range balance of fuel and energy will be difficult, if the relative degree of the increase of the cost of some sources of energy is not determined at least tentatively, for which it is necessary to establish the long-range prices for some types of fuel and energy. The same thing can be said about raw materials. Long-range prices will make it possible to solve the question of the economic feasibility of placing on the balance the new sources of raw materials and fuel and the new

geological reserves of natural resources, which are presently being discovered, and of the possibility of using them in the future. Long-range prices are also necessary for the main types of equipment, without them it is impossible to determine in an economically competent manner the main directions of technical policy.

When elaborating long-range prices it is necessary to proceed from the need for a possible moderation of the negative influence of the increase in prices on some types of mineral fuel and raw materials. The dynamics of the prices should control the efficiency of the fuel and power balance and the rational use of energy and materials in the processing industry. In other words, the long-range prices should become the most important instrument for checking the dynamics of production efficiency and at the same time a tool for influencing these dynamics.

As a rule, they should be aggregated by groups of items. In the future long-range prices will become the basis for determining the dynamics of specific prices, as well as forming the prices for new items.

Changes in the prices cannot be made immediately after each change in the socially necessary labor inputs. The need for the adjustment of prices should gradually accumulate. Therefore, their slight lag behind the change of inputs is inevitable. But such a lag should not be long-term and considerable. It is known that major adjustments in prices were made in 1955, then the prices remained, in essence, unchanged until the 1967 wholesale price reform. During that period the prices began to differ excessively from the labor inputs.

It is necessary for the price changes to be made at the beginning of each new five-year plan. Moreover, for the purposes of ensuring the unity of the prices and the plan the five-year plan itself should be drawn up in the new prices. Such a procedure will make it possible to solve the problem of the approximation by prices of the labor inputs and the stability of the value indicators of the plan.

Whereas in the majority of sectors the making of changes in the prices once every five years is adequate, in some of them, where the products list changes especially rapidly in connection with technical progress, a five-year period can be inordinate. In instrument making, electronics and some sectors of electrical and radio engineering the prices, in reflecting the increase of production efficiency, should probably be decreased twice during a five-year period. However, each of the decreases should be taken into account beforehand in the five-year plan, stipulating not only the year that the changes and adjustments of the prices are to be made, but also its approximate amounts, consequently, new indicators of the plan (which are affected by the change in prices) and long-term standards should accordingly be elaborated.

Unfortunately, during the 10th Five-Year Plan the necessary changes in prices were not made. As a result, the wholesale prices introduced in 1967,

that is, 12 years ago, continue to be in effect for the majority of items. That is why a considerable gap between prices and the actual labor inputs has formed again, and they are losing their importance as an economic category which influences the level of cost accounting and the organization of production.

In the past decade considerable gains have been made in the science of pricing, which is making it possible to enhance the role of the price in the stimulation of technical progress and the increase of product quality and to link the level of prices more integrally with the efficiency of the production of items.

In a number of sectors of the extractive industry (the coal industry, the mining of iron and nonferrous ores, logging) cost accounting works poorly, since at the majority of the enterprises of these sectors its main requirements: the self-sufficiency and profitability of production, have been violated. On the other hand, too high a profitability, which lessens the interest of the collectives in increasing the production efficiency, has formed in many sectors of the processing industry. Artificially lowered prices for raw materials and fuel also are not conducive to the implementation of measures on their economy and distort the efficiency of their export.

Such a structuring of the prices for individual items, in the case of which the amount of the profitability will cease to depend on the value of the materials and raw materials, should become the most important task. The calculation of the profitability should be based on the enterprise's own expenditures, that is, the cost of processing the item. The experience of using this method of pricing is already available in the textile industry. The enterprise loses interest in the artificial overstatement of the materials-output ratio, since this no longer provides it with an additional profit, the interests of the enterprise and society as a whole begin to coincide.

However, the main questions of stimulating the drive of collectives of enterprises to reduce the production cost cannot be solved only by the reorganization of the methodology of pricing. Some economists believe that such stimulation can be achieved only with the shift to the direct planning of the production cost and the transformation of the production cost into a fund-forming indicator. In other words, it is proposed to replace the indicator of the profit by the indicator of the production cost.

This proposal seems unacceptable to us for the majority of sectors of industry. The point is that the indicator of the profit has a number of significant advantages as compared with the production cost. In a correct system of markups and discounts the profit expresses not only the expenditures on production, but also the quality of the produced product. The net profit also expresses the degree of the rational use of these resources, and above all the capital-output ratio of the product. Finally, and this is very important, the profit expresses directly the net income of the enterprise, consequently, it characterizes the contribution of the latter to the

amount of resources, which the socialist state has available for the purposes of expanded reproduction, the formation of public consumption funds and the satisfaction of other needs.

However, it must be remembered well that the main source of the increase of the profit is still the reduction of the production cost of products, and the movement of the profit to the forefront does not yet mean the underestimation of the importance of the indicator of the reduction of the production cost. The question is, by means of what levers is it possible to influence more effectively the dynamics of the production cost of products?

We believe that the establishment of economically sound standards of the consumption of physical assets and labor inputs and the transformation of the production cost and prices into standard values are the decisive factor. The standard method of planning should be integrally coordinated with the effect of economic levers.

We imagine that this process can be realized in the following manner. When working out the design or model of a new item it is necessary at the same time to elaborate all the standards of both material and labor expenditures on the basis of the state planning assignments on the saving of materials, the growth of labor productivity and the increase of the quality of items. The designs which do not meet these requirements, as a rule, should not be proposed for production (of course, the real validity of such standards should be checked beforehand using test models).

The standard production cost of an item, which will be used as the basis of the price of the item, should be formed on the basis of the indicated standards. With such a pricing mechanism the enterprise that keeps within the standards will receive the profit established for it according to the plan and will be able to have the appropriate economic incentive funds, while the enterprise that violates the standards will not have the planned profit and its incentive funds will be reduced accordingly. For enterprises that have achieved better indicators than the standard indicators both the profit and the funds will be greater.

The established standards should gradually be made stricter, which can be achieved in two ways: by revising them from time to time for items which have been in production for a long time, and by determining them more strictly for new items than for the previously produced types of items. The mechanism for implementing the demands of the 25th CPSU Congress that the prices for new items per unit of utility should be lower than the prices for old items is thereby safeguarded.

Since in the production of new items, especially complicated ones, the established standards initially might not be achieved, the increased expenditures can be temporarily recovered from the funds for the development of science and technology. Every production association should have funds for this in certain amounts. If the amounts of the funds are inadequate, assets should be allocated from the corresponding funds of superior organizations or by means of credits of banks.

It is necessary to establish the standards of the consumption of materials, raw materials, fuel and so on not only in physical terms, but also as far as possible in value terms, with allowance for both the current and the long-range prices. This should eliminate the impermissible situation, which has formed in a number of instances in the economy, when the consuming enterprise is not interested in the price of the materials being purchased, since the latter, regardless of its validity, will be taken into account when planning the production cost and the prices of the finished product, as well as the estimated cost of capital construction. At the same time it is necessary to formulate a system, in case of which the producer of the finished item would be interested in the lowest possible price for purchased materials and raw materials. But this can be achieved only by determining the prices on the basis of standards.

The movement launched in industry, construction and transportation for the creation of so-called multiple-skill brigades (often they are not entirely accurately called cost accounting brigades) is acquiring enormous importance for the strengthening of economic incentives. The essence of the work of the brigades consists in the fact that payment is made according to the end result, in conformity with the amount and quality of the products produced by the brigade as a whole. Here the consumption of raw materials and materials, the amount of waste, the saving of fuel and electric power and other basic elements of the production cost are taken into account as far as possible.

The multiple-skill brigades make it possible to use economic incentives more effectively in the organization of production and to successfully combine the personal interests of the individual workers with the interests of the collective as a whole and in the end with the aggregate interests of society. This is the new thing that has emerged recently in socialist competition. The creation of multiple-skill brigades makes additional demands on the uniformity of material and technical supply, the regularity of the organization of production and the improvement of the organization of primary accounting at the works. The normal functioning of such brigades is incompatible with either the so-called cauldron method of accounting or the non-semimanufacture method, that is, with any kind of oversimplification of primary accounting at an enterprise, which, although condemned long ago, still occurs in practice. Meanwhile, the proper use of modern calculating equipment is creating the conditions for the organization of accounting, which our economy has never yet had.

In this connection the question of a labor force of bookkeepers arises. There are not enough skilled bookkeepers in the country. Many of them are of retirement age or close to it. The accountant has become one of the least "prestigious" occupations. At the same time reasonable management and the proper use of economic levers involve not only the figure of the chief economist, but also necessarily the figure of the chief accountant. He should head the drive for the strictest policy of economy of all the resources of the enterprise.

The proper use of the economic incentive funds, the amount of which is sufficiently great, is of particular importance. According to the 1977 data, for industrial enterprises alone the payments from the economic incentive funds were 6.1 billion rubles. However, the effectiveness of these funds is inadequate, which is attested, in particular, by the nonfulfillment of the plans on the increase of labor productivity at many enterprises and in many sectors of industry.

The weak influence of the incentive funds on production efficiency can be explained by two factors. First, by the accepted procedure of forming these funds. The amount of the funds, which is indicated in the plans of the enterprises, in no way influences the amounts of the wage funds, regardless of the production efficiency achieved by the enterprise. Only with the non-fulfillment or overfulfillment of the plan (according to specific indicators) is the amount of the wage funds adjusted.

These indicators can be changed in different directions. For example, the incentive fund is decreased for the nonfulfillment of the assignments on labor productivity and at the same time can be increased for the above-plan increase of the number of items with the Seal of Quality. Such changes in the amounts of the fund are not always comprehensible to the collective, which poorly senses the dependence of the total amounts of the incentive fund on the quality of its work.

The proposal of a number of economists to calculate the economic incentive fund directly in fractions of the profit would promote the enhancement of the role of the fund in the life of the enterprise, especially as the profit serves as the most important synthetic indicator of the efficiency of its operation.

When forming the fund, depending on the amount of the profit, it is necessary to keep in mind the net profit, that is, that part of the balance sheet profit, which remains after the payments to the budget, the interest for credit, as well as the subtraction from it of the amounts which were formed as a result of violations of certain regulations of management or others (violations of prices, the assortment and so on). With such a method of calculating the funds they will be made dependent on the degree of intensity of the plan of the association (enterprise).

Another reason for the inadequate effectiveness of the economic incentive funds is the very system of their expenditure. As is known, incentives are paid to workers in conformity with the permanent systems of awarding bonuses at the expense of the wage funds, while similar payments to engineering and technical personnel and employees are made at the expense of the incentive funds. Such a procedure, in case of which a considerable portion of the stimulation funds is spent on paying bonuses to the engineering and technical staff, obviously does not pay for itself, since the interest of the entire working collective in the creation of the funds and their systematic growth is lessened. Moreover, the engineering and technical personnel are awarded bonuses on the basis of a large number of other sources: from the

fund for science and technology, for the filling of export orders, the turning over of scrap metal and so on. Therefore, there are often cases when, taking into account the prevailing maximum receipt of bonuses, this category of workers loses direct interest in increasing the incentive funds.

As a result, the influence of bonuses decreases, and they begin to be regarded as a mechanical raise in wages. In our opinion, the efficiency of the use of economic incentive funds could be increased by means of the following measures. It is necessary to include in the wage funds all the regular bonuses, which function, in essence, as a variant of the wage, regardless of what category of workers they are paid to--workers, employees, engineering and technical personnel. Only lump-sum bonuses for special achievements should be paid from the incentive funds. The prevailing separate types of lump-sum bonuses, which have independent sources, should also be paid at the expense of the economic incentive fund, just as all bonuses for socialist competition.

Contrary to the opinion of many authors, it is necessary to attach great importance to payments according to the results of the work of the association (enterprise) for the year (the "thirteenth wage"). The point of this reward is that it creates an interest of all the members of the collective in the end results of the work. At the same time it should promote the attachment of personnel and the control of the turnover. In order to achieve this it is necessary to grant the right to receive the annual reward to the workers who have worked at the given enterprise not less than three years (at present those who have worked for one year receive it). Of course, the workers, who fail to appear at work or appear at work drunk, are deprived of the lump-sum reward. The amounts of the reward should be increased for those who have especially distinguished themselves--the organizers of progressive initiatives, workers who have completed their five-year plans early, as well as workers with a long length of service at a given enterprise.

Such a system seems more suitable than the seniority payment, which has been newly introduced in recent years in a number of sectors of industry. The latter does not depend on the results of the work of the collective and does not create an interest of individual workers in increasing the efficiency of social production, since it is a part of the wage, which is only guaranteed under certain conditions.

It is necessary to determine the amounts of the annual reward under the strict control of the public and to examine the lists of those receiving it and the percentage of the bonus in the work brigades and at the general meetings of the production subdivisions and shops. At the same time it is necessary to establish the public reporting of the managers of enterprises on the actual sources of the formation of the incentive funds and their use. The reports can be both independent and a part of the report of the management on the economic results of the activity of the enterprise for the year. Under all conditions the issuing of the annual reward should be timed to coincide with the tallying of the results of the socialist competition, the presentation of the challenge banners and the confirmation of the honorary

titles of the shock workers. In other words, the economic incentive funds should be used as a means of cultivating a communist attitude toward labor; it is necessary to interweave economic incentives closely with moral incentives. The distribution of the fund should be a major event in the socio-political life of the collectives.

There is often raised against the extensive use of economic incentive funds for annual payments the objection that such a procedure removes economic stimulation too far from the current, immediate results of labor. Meanwhile, not so much the single achievements, but the steady work of the collective as a whole for a long segment of time, which to a great extent is achieved by the practice of awarding annual bonuses, is important for increasing the efficiency of social production. A certain portion, but not the bulk of the funds can be used in the middle of the year for the economic encouragement of one-time achievements.

The amounts of the economic incentive funds depend on the results of the activity of the enterprises in the area of technical progress and product quality. It is extremely important to develop in every possible way the practice of price markups or discounts depending on the technical novelty and quality of an item so that these markups and discounts would directly affect the amounts of the funds. The law: the higher the technical level of a product is and the better its quality is, the greater the funds are, the higher the material prosperity of the collective members is and the better their mental state is, should be indefeasible. Since the fund for sociocultural measures and housing construction is not directly connected with the economic incentive fund, it is necessary for a higher efficiency of the work of a specific enterprise to become a condition of its successful social development.

Let us dwell on another urgent question of the use of economic levers and incentives, namely the organization of payments for shipments of goods. The proper organization of the latter is of great importance for the consolidation of cost accounting, control by the ruble and, consequently, the additional stimulation of production efficiency.

In economics literature and in recent practical measures of USSR Gosbank this question has been examined primarily from one direction--the protection of the interests of suppliers from careless customers, the prevention of so-called nonpayments. But at present another aspect of the problem is assuming greater and greater importance--the monitoring by the customer of the fulfillment of contractual obligations on the part of the supplier, above all the quality of the goods being delivered. Whether it is a matter of raw materials, materials, machinery and equipment or of consumer goods, it is stated in the materials of the 25th CPSU Congress, it is necessary to afford the consumer more extensive opportunities to influence production.¹

1. See "Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress], Moscow, Politizdat, 1977, p 60.

The current system of bank settlements of customers with suppliers was established under the conditions of the 1930's and far from fully meets these demands of the congress.

At present the acceptance method, in case of which the customer settles with the supplier on the basis of the demand for payment received by him, without seeing, as a rule, the commodity and without checking its quality, is the almost exclusive form of settlements for goods. Such a procedure undoubtedly decreases the responsibility of the supplier for the quality of the commodity. The need for the intensification of the monitoring by the customer of the quality of the commodity presumes the making of serious changes in the current practice of settlements.

One way has already emerged, and it is necessary to introduce it in practice as quickly as possible: settlements with equipment suppliers only after its delivery to the construction project or the enterprise being reconstructed and its successful installation. This method of settlements, which is being implemented at the enterprises of the Ministry of Chemical and Petroleum Machine Building, has shown its effectiveness. It presumes the radical reorganization of the interrelations of machine building with equipment buyers and the serious change of the functions of the main administrations of supply of equipment in complete sets of USSR Gosstab.

It seems that the time has come to raise at the same time the question of changing over in general from the acceptance of the demand for payment by the buyer after its presentation to acceptance after the receipt and check of the quality of the commodity. There is no doubt that this is a technically difficult means, in case of which a number of questions arise.

First of all it is necessary to determine the methods of bank monitoring of the timeliness of payment. At present the situation is as follows. The payment authorization arrives at the bank serving the buyer, and the bank is obliged to keep track of the punctuality of its payment or under specific, strictly established circumstances of the refusal to pay. Under the new system of payment, which seems correct to us, the need for such checking disappears. The arrival of the demand for payment at the bank will no longer be connected with its payment on a specific date, since the latter is determined by the date of arrival of the commodity. The scheme of settlements appears to us as follows:

the payment authorization arrives at the bank, which keeps track of its payment;

the obligation to settle the demand for payment with the supplier arises at the moment of arrival of the commodity and the check of its quality. As a rule, at 10-day period is allotted for such a check. Other longer periods can be established in the delivery contracts depending on the specific properties of the commodity, but the bank should be notified about them in due time, since the credit on the documents in transit is extended for the additional period. So that the bank could keep track of the punctuality of

payment, it should receive from transportation organizations notification of the arrival of the commodity at the address of the buyer;

if disputes arise between the supplies and the buyer concerning the quality of the goods, they should be resolved in the organs of the State Committee for Standards.

It stands to reason that in the case of this system the transportation organizations are made economically liable for the safe keeping of the commodity in transit.

Of course, the proposed scheme is technically more complex than the current one and, probably, from the standpoint of the direct expenditures on implementing it will be more expensive than the acceptance form in the presently existing form. But the question of the increase of the quality of goods, the responsibility of the suppliers for them and the intensification of the monitoring by the buyer, from the national economic standpoint, is so important that the additional expenditures undoubtedly pay for themselves.

There can probably be other forms of the solution of this question. It is clear, however, that the presently existing acceptance form of payment has become obsolete and no longer conforms to the strategic policy of the party of increasing production efficiency and work quality and of increasing in general the responsibility for the level of production.

The proposals made in this article concerning the enhancement of the role of individual levers and incentives do not touch upon other very important questions of the extension of credit, budget financing and the reorganization of the wage system. However, it is clear that in order to ensure their proper interaction the economic levers and incentives should be used in combination and rationally, and here it is necessary to proceed from the fundamental principle of centralized planning in the management of the national economy.

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